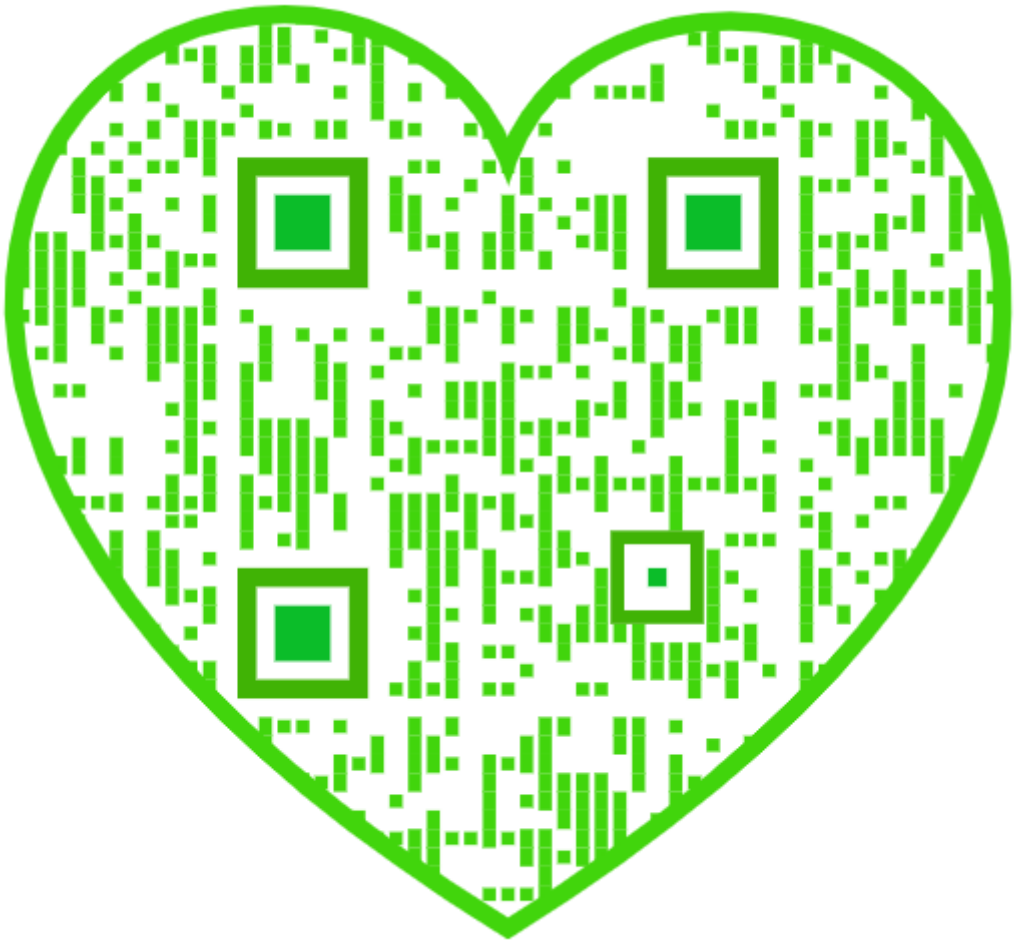

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(Resolution adopted October 25, 1926, and revised February 6, 1933, and February 24, 1941)

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BUSINESS FINANCE AND BANKING

by

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The University of Chicago

and

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FINANCIAL RESEARCH PROGRAM

STUDIES IN BUSINESS FINANCING

NATIONAL BUREAU OF ECONOMIC RESEARCH

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PREFACE

THE NATIONAL BUREAU's Financial Research Program has three major objectives: first, the comprehensive reexamination of modern financial organization with reference to the fundamental financial services that the constituent institutions render to the community; second, the study of the effects of law and public regulation and supervision on the functioning of the financial system; and third, the investigation of how instability in financing activities is related to general economic instability.

These major aims are being accomplished through the conduct of a series of projects, each devoted to a phase or process of the financial system, so far as these can be delineated for separate study. The first project in the series dealt with consumer instalment financing and the second, the results of which are summarized in the present volume, with business financing. Projects in investment credit, agricultural finance, and urban real estate finance are now in process. The final attainment of original objectives will require further studies of lending and investment technology, and also of the ways in which financial institutions affect the economic system through their influence on the volume of circulating media.

From the beginning of the Program, a standard method has been followed in the development of each project. A pre-research survey determines the adequacy of existing knowledge about the financing process that is to be considered, and appraises needs for additional information. On the basis of the results of this survey, a number of studies are initiated, some of a technical nature and limited in scope, in order (1) to develop new data that may be essential to round out existing knowledge and (2) to examine in adequate detail those phases of the subject which require intensive study. The findings of these primary studies are then brought together and integrated in a concluding analysis.

Business Finance and Banking is the capstone study of the Business Financing Project. This project has endeavored to determine for recent years the general pattern of demand in the market for short-term and medium- and long-term business credit; to trace the

structural changes that have occurred since 1900 in the business financial organization, especially in manufacturing and trade enterprises whose credit demands have been the bulwark of the short- and medium-term credit market; to relate these changes to major changes in the structural organization of the economy; and, finally, to describe the adaptations that financing institutions providing credit have made over the past decade in response to changing demands for their services. During the thirties, the business loan assets of banks on the average were substantially below the levels attained in the twenties, and in relation to total assets they were much less important than in previous banking experience. Therefore, a problem of special interest in this study has been whether this development indicates a long-run tendency for the business financing function of the commercial banking system to decline.

The primary studies, on which the authors of this volume have drawn extensively, fall into two groups. The first is concerned with the contemporary financial structure of business and with changes in that structure since 1900. The second comprises surveys of a number of modern institutional arrangements for financing business enterprise which represent significant adaptations in the business financing process.

The studies in the first division of the project include four published monographs and two unpublished reports, as follows:

The Financing of Large Corporations, 1920–39 (1943), by Albert R. Koch
Financing Small Corporations in Five Manufacturing Industries, 1926–36 (1942), by Charles L. Merwin
Corporate Cash Balances, 1914–43: Manufacturing and Trade (1945), by Friedrich A. Lutz
The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937 (1945), by Walter A. Chudson
Industrial and Commercial Debt: A Balance Sheet Analysis (ms. 1942), by Carl Kaysen
Changes in the Financial Structure of American Business Enterprise, 1900–1940 (ms. 1943), by Sidney S. Alexander

The preparation of these studies required the compilation of several samples of corporate balance sheet data for selected years in the

period 1900–1940; several samples of balance sheet and income statement data for identical companies covering selected periods since 1900, and particularly since 1914; and a number of special tabulations of corporate financial data for selected years in the period 1931–37, derived from compilations of the Bureau of Internal Revenue and the Securities and Exchange Commission.

The studies of modern institutional adaptations in financing business enterprise consist of four published monographs and two unpublished reports. The published monographs, prepared in collaboration by the authors of the present volume, Neil H. Jacoby and Raymond J. Saulnier, are:

Term Lending to Business (1942)
Accounts Receivable Financing (1943)
Financing Equipment for Commercial and Industrial Enterprise (1944)
Financing Inventory on Field Warehouse Receipts (1944)

The two unpublished reports are devoted to an examination of Federal Reserve industrial loan experience under Section 13b of the Federal Reserve Act. The first, which was a collaboration of Charles L. Merwin and Charles H. Schmidt, is a detailed study of the financial history of a sample of borrowers; and the other, a collaboration of Robert V. Rosa and Malcolm C. Urquhart, is an examination, based on the same sample of cases, of factors that affected the credit standing and experience of borrowers.

The Business Financing Project has been carried to completion under grants of funds from the Association of Reserve City Bankers, The Rockefeller Foundation, and the Carnegie Corporation of New York. None of these sources of financial support is to be understood as approving, by virtue of its grant, any of the statements made or conclusions reached in the publications of the project.

To carry out the project, extensive assistance has been essential from various groups, both public and private, and from individuals. Cooperation has been received from Dun & Bradstreet, Inc., the Board of Governors of the Federal Reserve System, the Federal Reserve Banks of New York, Philadelphia, and Chicago, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Reconstruction Finance Corporation, the

Securities and Exchange Commission, the Treasury Department, the Department of Commerce, the American Institute of Accountancy, and from officers of commercial banks, insurance companies, and lending agencies in leading financial centers of the country. We are deeply indebted to these officials and agencies for the information, materials, and other help which they have provided so generously.

Research on the Business Financing Project was carried on under the direction of Dr. Ralph A. Young, whose enthusiasm and keen interest stimulated all those participating in the project. The authors of the present volume, who have taken part in the project since its initiation, are sincerely grateful to Dr. Young for his penetrating criticisms and constant encouragement throughout all phases of the work. In the preparation of the present study, the authors have been ably assisted by Miss Dorothy Wescott, who edited the manuscript and aided in the solution of many difficult problems of presentation; by Dr. Herman Burstein and Miss Jean Wightman, who served as research assistants; by Miss Molly Silver, who prepared the charts; and by Miss Mildred Courtney, who supervised the preparation of the typescript.

Raymond J. Saulnier
Director, Financial Research Program

October 1946

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STUDIES IN BUSINESS FINANCING

BUSINESS FINANCE AND BANKING

NBER FINANCIAL RESEARCH PROGRAM

Summary

TWENTIETH CENTURY DEVELOPMENTS IN BANK FINANCING OF BUSINESS

ABOUT ONE-HALF OF THE earning assets held by American banks at the beginning of the twentieth century may be classified as "business" loans; the remainder were principally loans made for agricultural purposes, loans secured by stocks and bonds and real estate, and securities. The bulk of the business loans were short-term credits extended to nonfinancial business — and mainly to manufacturing and trade concerns of small and medium size — for financing working capital needs. The network of banks was appropriately described as a "commercial" banking system, because short-term loans to nonfinancial business were the largest single class of bank earning assets, and banks were the principal agency engaged in making such loans.

Forty years later this relatively simple pattern of banking had altered in five important respects: "commercial" lending — or what in this study is called "business" lending — by banks had become subordinated to other bank financing activities, notably to the financing of the federal government; the types of loans made to nonfinancial business, and bank practices in extending such loans, had been greatly modified; banks were in more active competition with other types of financing institutions in lending to nonfinancial business; loans to financial enterprises, such as consumer and commercial finance companies, constituted a major element in bank loan portfolios; and the direct financing of consumers had become an important factor in banking.

Various interpretations have been placed on these broad changes in banking, not the least uncommon of which is that they indicate a long-run, and persisting, tendency for the business lending function of banks to decline. The present summary attempts to describe briefly the character of the changes in bank lending activities after 1900, and to show why these changes took place. Specifically, answers to the following questions are sought:

What basic underlying forces affected the business credit market after 1900 and, in particular, influenced the demands of non-financial business for bank credit?

What changes occurred after 1900 in the character of the business economy, and of business demands for funds, which influenced the demand for credit facilities?

How did the business financing needs met by the banks change after 1900?

What changes took place up to 1940 in the way commercial banks functioned as business lending agencies, and in the competitive framework within which these functions were performed?

What adaptations did banks make in lending policies and procedures to meet the changing demands of business for financing?

How did World War II affect business financing by banks?

And finally, against the background of this near half-century of development, what are the problems that banks face in adapting their lending practices to the changing credit needs of business?

BASIC UNDERLYING FORCES AFFECTING BUSINESS DEMAND FOR BANK CREDIT

Developments in the business credit market between 1900 and 1940 reflected the action of numerous economic forces, some of them so deep-seated and so significant in their effect on business financing as to warrant special attention. These forces and their principal effects may be summarized briefly:

First, the general growth of the economy until 1929 and the interruption of growth in the thirties produced qualitative changes in the organization and practices of business, which affected the aggregate demand for business financing and which compelled financing agencies to make important adjustments in their business lending practices.

Second, after the beginning of the century, most sectors of the economy — particularly the extractive and manufacturing industries — tended to use higher proportions of fixed capital to direct labor. This development encouraged long-term, compared with short-term, financing and increased the risks of business lending, because of the greater potential and actual variability in the level of business activity.

Third, the tendency, especially marked during the twenties, for

consumers to spend a greater proportion of their income on durable goods of high unit value caused an increase in the degree of instability inherent in the economic process and raised the proportion of consumer to producer credit in use in the business system. Among the results of this shift were the rise of the finance company, the partial substitution of credit extended to financial enterprises for credit extended to nonfinancial business, and significant changes in the institutional structure of the credit market.

Fourth, the persistent and, to a certain extent, increasing instability of business activity after 1900 was responsible for levels of risk higher than would otherwise have been the case. This fact affected both the magnitude and the character of business needs for funds.

Fifth, after 1930 the increased importance of government in the process of capital formation, and the financing of a sizable part of government expenditures by borrowing, resulted in an accumulation of government debt in the banking system and substantially altered the structure of assets held by banks. Furthermore, to the extent that the financing of government deficits increased the liquidity of business concerns, as during World War II, business demands for bank credit were weakened.

Finally, the persistent decline in interest rates after 1930 was a fundamental cause of many changes in the business credit market. One important result was that the widening margin between returns on loans and returns on investments encouraged banks to intensify their business lending activities. Bank lending policies and practices were changed, and new lending techniques were adopted. The different term structure of interest rates — with short-term rates below long-term rates — encouraged an extension of bank activities into the medium-term credit field.

CHANGES IN THE CHARACTER OF THE ECONOMY INFLUENCING BUSINESS CREDIT DEMANDS

Relative Decline of Industries Most Heavily Dependent on Bank Credit

In general, the changes in the industrial composition of the economy that took place between 1900 and 1940 were such as to

weaken rather than to strengthen the demand for short-term bank credit. Industries most heavily dependent on bank credit — such as manufacturing and agriculture — tended to fall in relative importance, while industries less dependent on bank loan funds either held their own or gained, e.g., service trades and transportation and other public utilities. Furthermore, within the manufacturing group itself the industrial subgroups that showed the greatest increases in their relative contribution to total output were those typically placing least reliance on bank borrowings, while the industries that fell behind were those most dependent on banks. The enormous growth after 1930 in government's role in the economy of course involved no direct use of business credit.

Increase in Average Size of Business Enterprises

The increasing average size of business enterprises, evident in every major industry except wholesaling after 1900, was an adverse factor in the use of bank credit, since the relative dependence on such credit was, in general, least among concerns of largest size, except in wholesaling. In the fields of manufacturing and retail trade, particularly, the very largest enterprises relied to only a minor extent on short-term financing. In wholesaling, the average size of concern probably did not change much between 1900 and 1920, but thereafter it declined. Since the dependence on bank credit by wholesale enterprises increases with size of concern, the tendency for their average size to fall after 1920 was a contractive factor in bank credit demand.

Shifting Relative Importance of Asset Items

Changes in the asset structure of business concerns, and in the amounts of various kinds of assets used to conduct a given volume of sales activity, influenced the amount and character of business demands for bank funds. Not much is known about changes in asset structure during the years from 1900 to 1914, except for a combined sample of large manufacturing and trade concerns whose current assets in percent of total assets rose rather gradually. However, if this broad change in asset structure is representative of changes in other industrial areas, it reflects conditions favorable to the gradual increase in outstanding short-term bank credit during those years.

For manufacturing and trade concerns, World War I produced a sharp rise in the relative importance of current assets — a change that was reflected in the expansion of short-term debt relative to long-term debt from 1916 to 1920. The opposite condition prevailed in 1921–22, as the economy suffered a sharp postwar deflation, and as short-term debt was repaid or in some instances funded into long-term debt or equity.

Most of the changes in the asset structure of manufacturing and trade concerns from 1923 to 1928 weakened the demand for short-term funds and strengthened the demand for long-term financing. These changes were generally characteristic of large companies, which were accounting for a growing proportion of sales in this period, and not of small and medium-sized concerns. Fixed assets grew in relative importance; cash increased in proportion to total assets; and receivables and inventory became relatively less important elements among business assets. All these factors, while not characteristic of every line of manufacturing and trade, were sufficiently general among large concerns during this period to counteract in part the expansive influence of economic growth and business asset expansion on short-term bank credit demands, and to encourage long-term as against short-term financing.

After 1929, the general decline of prices and the contraction of business assets — notably current assets — were accompanied by a sharp deflation of short-term business debt. While this tendency was reversed after 1933, no appreciable recovery in the amount of bank credit used by business occurred until 1936. However, the bank credit that began to be used then in increasing amount was credit of medium term, extended primarily to large concerns; it differed from conventional short-term bank credit not only in respect to term but also in repayment provisions, which were commonly arranged on a regular amortization basis.

Increases in Business Cash Balances

Not until the thirties did holdings of cash or its equivalent by large manufacturing and trade corporations assume amounts that could be considered excessive in relation to business needs for funds. Concurrently, the notes payable element among the liabilities of large concerns tended to decline in importance.

The effect of these twin tendencies on the demand for bank credit

by large concerns was to increase the flexibility of their financing with bank funds; that is to say, where the ratio of bank debt to total assets was low, a relatively minor transformation of receivables and inventory into cash might have been sufficient to supply funds promptly to eliminate that debt from the balance sheet. When bank debt was eliminated, or nearly so, further inflows of cash were used to retire longer-term funds, to pay dividends in excess of earnings, or to build up "free" balances. Since there are limits during a period of business contraction to which it is possible and appropriate to follow the first two of these policies, the last took place on a considerable scale. Consequently, when sales growth set in again it was financed in large part by a transformation of cash back into receivables and inventory, even into plant, without recourse to external funds. Only when sales, and expectations of sales, were very high was an expansion of total assets needed, and consequently only then did a demand for outside funds arise. Since the amount of sales expansion that could be achieved without the use of outside funds increased with the amount of "free" cash holdings relative to total assets, the credit needs of large concerns, whose cash accumulations were most marked, were generally slow to increase.

Small and medium-sized companies up to 1940 were less successful than large concerns in accumulating cash; moreover, their ratios of payables to total assets showed no tendency to decline. Therefore, in years of reduced sales volume their cash holdings were decreased through operating losses, payment of unearned dividends, and retirement of current debt; and in years of expansion their use of short-term borrowed funds increased rather promptly. In other words, small and medium-sized enterprises had less flexibility than large concerns in financing asset accumulations with short-term credit.

Changing Relative Importance of Debt Items

In the period 1900–1920, when bank loans to business were growing continuously, the proportion of debt to total business assets showed a corresponding tendency to rise. All types of borrowed funds increased, with notes payable expanding particularly during World War I and into 1920.

Beginning in 1920, however, all debt items declined as a percentage of total business assets. Among large manufacturing concerns the decrease was particularly marked for long-term debt and notes payable; the decline of trade credit was much less drastic. The liquidation of debt accelerated in the early thirties but exhausted itself by 1935; there was then some tendency for both short- and long-term debt funds in percent of total business assets to increase among all sizes of manufacturing and trade concerns.

Asset Expansion and External Financing by Business

In general it appears that business concerns did not retain sufficient earnings to finance rapid expansion of their assets, but that when asset expansion was at a low or moderate rate, retained earnings came near to satisfying the demands for funds. Sample data for manufacturing and trade concerns reveal that the annual financing needs of these enterprises increased sharply during World War I, rose persistently and at a relatively high rate during the twenties, and then contracted sharply in the early thirties. A rapid increase in 1934–37 was followed by a decline in 1938 and an enormous increase throughout the war period. This record of variability considerably exceeded that of the earnings retained by manufacturing and trade concerns, and suggests that the demand for external funds was more actively determined by the rate of growth of business assets than by the retention of earnings.

During 1934–37 the rapid growth of business assets created as great a demand for external funds, relatively speaking, as in any period of business expansion after 1914, indicating that the demand for outside funds continued to be substantial provided the expansion of business assets was at a high, and particularly at an accelerating, rate. However, the mere maintenance over a period of years of a given rate of expansion of business assets, even at a relatively high rate, seems to have been an insufficient basis for a vigorous demand for external funds. During such a period dependence on outside funds apparently was reduced because of the persistence of a high level of earnings, leading to a more rapid accumulation of retained earnings than to increased dividend disbursements, and because of a tendency for financing needs to be anticipated and provided for in the early stages of expansion.

CHANGING CHARACTER OF BUSINESS FINANCING NEEDS

Shifts in Relative Importance of Industries Borrowing from Banks

Information on the relative importance of different industrial groups as commercial bank borrowers is not available prior to 1920. In that year loans to manufacturing and trade enterprises comprised the largest percentage of total bank loans to business. Bank borrowings by public utilities and finance companies, in contrast, were of negligible importance in 1920. By 1940, however, the proportion of total loans extended to these businesses had risen sharply, while the percentage of loans to manufacturing and trade concerns had dropped considerably. Changes in borrowings of wholesale and retail trade cannot be measured separately, but indirect evidence clearly points to a substantial decline between 1920 and 1940 in the relative importance of loans to wholesalers.

Importance of Loans to Small and Medium-Sized Businesses

Shifts after 1900 in the industrial character of the companies borrowing from banks make it difficult to reach conclusions as to changes in the average size of borrowing enterprises. For example, the rising importance of service concerns, which were typically small, tended to counteract the increasing importance among bank borrowers of public utility concerns (including railroads), where average asset size was high, and of a few very large finance companies. But whatever the size pattern of the business borrowing clientele in 1900, the "typical" short-term borrower around 1940 could be described as a small or medium-sized manufacturing or trading concern, of somewhat less than average profitability. Of the total amount of bank loan credit used by business around 1940, some 70–80 percent is estimated to have been used by companies with assets of less than $5 million.

Growing Importance of Medium-Term and "Direct" Lending

Bank lending in the field of medium-term credit under a specialized instrument — the term loan agreement — increased markedly between 1933 and 1940. As a result, loans of short maturity declined

in importance among the business loan assets of banks: thus, bank loans with maturities of less than 90 days accounted for 57 percent of all loans and discounts in 1913 and about 30 percent in 1940. In medium-term lending, banks served size groups of borrowers ranging from very small to very large; but the bulk of credit of this type which they extended was to businesses that lay between the very large concerns financed by life insurance companies and the medium-sized and small concerns served by public lending agencies. Because medium-term loans had been made by banks for only a short period prior to World War II, generalizations regarding change are precarious, but at the outbreak of the war bank term loans apparently were being used to an increasing extent by companies of smaller size and by a wider range of industries than in the middle thirties.

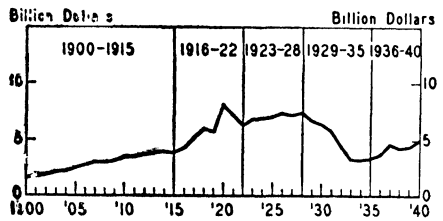
Changes in the role played by banks in the long-term credit market, through their purchases of corporate debt securities, may be indicated, roughly, by broad shifts in the character of the bond market. Between 1900 and 1939 the pre-eminence of the railroad in the market for long-term credit (represented by bonds with original maturity of over 15 years) was successfully challenged by public utilities; and in the medium-term credit market (represented by bonds of maturity of 15 years and less), by manufacturing companies. Average size of long-term credits, like credits in the medium-term market, increased, and original maturities of outstanding bonds had a somewhat lower average term in 1939 than in 1900.

Another important change in the medium- and long-term business credit market was in the relative importance of "direct" as against "indirect" borrowing, that is, in the advance of funds on the basis of direct negotiation between borrower and lender as against the acquisition of funds through the public sale of evidences of debt. In so far as the functioning of commercial banks is concerned, there was little if any change in the relative importance of the two means of raising funds up to 1922; during the remainder of the twenties, however, indirect financing, through bank purchases of publicly offered corporate securities, gained considerably in relative importance. This tendency was reversed in the thirties as the private placement of corporate securities and the acquisition of medium-term funds through term loans tended to grow in im-

portance. Of the gross proceeds of bond issues in 1942–43, 42 percent was provided by private placements, in contrast to 29 percent in 1934–35; and bank term loans in 1940 amounted to one-half of bank holdings of corporate securities, whereas in the middle thirties the proportion was negligible.

CHANGING POSITION OF COMMERCIAL BANKS IN THE BUSINESS CREDIT MARKET

Business Loans of National Banks, 1900–1940



Although a basic continuity is apparent in the development of relations between banks and business enterprises between 1900 and 1940, it is strikingly evident that the banking changes which took place can be described most effectively if the entire interval is divided into a series of relatively brief periods. Thus, functional shifts and adaptations can be discussed by periods in which substantially different forces and conditions were influencing the business credit market. The dividing years may be determined, roughly, by changes in the business loan outstandings of national banks, as indicated in the accompanying chart; they are not necessarily the same as those years which divide periods of change in other aspects of the economy.

1900–1915: A Period of Sustained Banking Growth

Since the present study is limited to banking changes in the twentieth century, the first period of banking development is dated arbitrarily from 1900. In this period which extends through 1915, business loans of national banks grew fairly regularly at an average annual rate of about $150 million. Gently rising prices and a growing volume of business assets were associated with the gradual expansion in business financing by banks, whether measured by the increase of bank portfolios of business loans and discounts, or by the increase in such portfolios plus bank holdings of private corporate securities. Compared with the periods that followed, this was an era of relatively long and stable growth, marked by no apparent

change of basic importance in the general functional pattern of banking or in the way the specific function of financing business was performed.

1916–1922: Rapid Expansion and Contraction of Bank Loans to Business

The second period is that of World War I and its immediate aftermath of accelerated price inflation and subsequent deflation. From 1916 to 1920 the commercial banking system grew rapidly, as war production programs, inventory accumulation, and rising prices increased business demands for bank credit. During these years business loans of national banks rose on the average by $870 million annually. Although price declines began in 1920 the deflation of bank credit was not pronounced until 1921–22. These were years of sharp contraction in business assets, yet the business loan increases of the earlier years were not entirely lost. As far as the business lending activity of commercial banks is concerned, the noteworthy effect of the economic expansion of World War I was a volume of business loans outstanding in 1922 nearly double that of 1915. However, total bank assets had increased about proportionately and the period ended with little over-all change in the relative importance of the business financing function of banks.

1923–1928: Period of Change in the Character of Bank Financing of Business

An appraisal of the years 1923–28 depends on whether only the growth of bank lending (still primarily short-term in character) is considered, or whether changes in bank holdings of corporate securities as well as changes in bank loans to business are taken into account. From the former viewpoint the third period contrasts sharply with the second; between 1923 and 1928 national bank loans to business increased at an average annual rate of only $180 million, which was about one-half the 1916-22 average annual increase. However, from the latter viewpoint, where business loans are combined with bank holdings of corporate securities, the rate of growth of bank holdings of business obligations was very nearly the same in the years 1923–28 as in the earlier period. Concurrently the amount of loans made on real estate and on the security of stock exchange collateral increased substantially. While the pro-

portion of these loans which can be properly termed business loans cannot be determined, it is clear that some were made explicitly as such and that a good part of all credit thus extended had the effect of lessening business demand for bank credit of conventional form. There was a distinct shift away from the conventional short-term, commercial type of lending and toward other, less direct, ways of financing business. In view of these facts the years 1923–28 are better characterized as ones in which significant changes occurred in the ways in which commercial banks performed their business financing functions than as years in which the conventional short-term financing of business tended to decline.

1929–1935 and 1936–1940: Periods of Contraction and Revival in Bank Lending to Business

In sharp contrast to earlier periods, when changes in the industrial structure of the economy, in the asset structure of business, and in the financial policies of business management were the primary factors affecting the business credit market, the demand for bank credit by business in the years 1929–35 was dominated by contraction of business assets, price declines, and general financial deflation. These circumstances were crucial in their effect on the business financing function of commercial banks. While a moderate increase in the business loan outstandings of banks began in 1936, as business activity revived and the rate of business asset expansion increased, the amount of bank credit in use by business in most years in the period 1929–40 bore a definitely lower proportion to the total value of goods and services produced in the economy than in previous periods. Furthermore, drastic shifts occurred in the relative importance of the business financing function of commercial banks and in the banks' competitive position.

As regards the former, the combined total of bank loans to business and bank holdings of business securities fell from 43 percent of total bank earning assets in 1930 to 30 percent in 1940. During the period 1929–35 the change in relative importance resulted from a shrinkage in the business loan assets of banks which was more rapid than that experienced by total earning assets; in the years 1936–40 the decline was due to a slower increase of business loans than of bank earning assets as a whole.

As regards changes in the competitive framework within which

commercial banks functioned as business lending agencies, a useful measure is the proportion of total business and consumer instalment credit extended by commercial banks compared with that extended by other agencies. For this comparison business and consumer instalment credit are combined because of the substitutability of the latter for the former, and the close competitive relationships between agencies functioning in these fields. While the total amount of business plus consumer instalment credit in use in the business system in 1940 differed little from that in use in 1930, the relative importance of the various agencies serving this joint market was very much altered between those two years. First, that part of the combined market served by commercial banks fell from 73 percent to 45 percent. Second, the segment served by insurance companies rose from 18 percent to 37 percent. Third, consumer instalment credit, which comprised but 9 percent of the total business plus consumer credit in 1930, accounted for 20 percent in 1940. The commercial banks' share of the consumer instalment credit market rose from 4 percent in 1930 to 27 percent in 1940. Finally, in comparison with the shifts in the importance of the major agencies serving the combined business and consumer credit market, the growth in the importance of commercial finance companies and of public lending agencies was of minor importance. The development of these agencies doubtless affected certain segments of the combined market with considerable force, but it did not substantially change the relative positions of major agencies.

Shifts in the positions of various agencies in the combined business and consumer credit market are, of course, the net result of numerous forces and conditions, but they clearly reflect two major developments of this period: first, the rise of consumption credit relative to production credit, and, second, the growth of medium- and long-term business credit, compared with the conventional short-term type.

ADAPTATIONS IN BANK LENDING PRACTICES

Primarily as a result of developments affecting business demands for credit, significant adaptations were made in the business lending policies and practices of commercial banks. During the years 1923–28 the adaptations were mostly in the direction of increased holdings

of private corporate securities, larger holdings of loans secured by real estate, and increased extensions of stock exchange collateral loans. In 1929–35 adjustments were limited by the over-all contraction of credit demand, but during those years forces and conditions developed which provided strong stimuli for change. By 1936, and in certain cases by 1934, significant adaptations were being made which in a few years substantially altered the functional character of the commercial banking system as a business financing agency. The salient changes may be summarized briefly.

(1) Banks greatly increased their participation in the consumer instalment credit market. Since this market grew more than the commercial banks' participation in it, the banks were able to hold larger consumer debt outstandings without reducing their loans to finance companies. However, since the acquisition of consumer receivables by business financing agencies placed nonfinancial business concerns in possession of cash, bank participation in this market, whether direct or indirect, was in varying degrees substitutive for direct business lending.

(2) Banks were able to serve more effectively as suppliers of credit to large concerns by extending serial repayment loans of longer average term, a development caused primarily by changes in the asset structure of nonfinancial businesses and in their business financing policies.

(3) Banks showed increasing responsiveness to the credit needs of small and medium-sized businesses, which provided the bulk of demand for their credit at all times. Because enterprises of these sizes fared badly during the thirties, the extension of credit to them called increasingly for methods designed to provide greater security for the lending agency and to minimize risks of default and loss. The adjustments which commercial banks made to meet these credit needs more effectively were marked by a willingness to write loans on terms more attractive to such borrowers (for example, term loans with instalment amortization and revolving credits supplying a reasonable guarantee of working capital facilities over periods longer than customary), and by the use of a wider range of security devices (such as the assignment of receivables, liens on income-producing equipment, the trust receipt, and the field warehouse receipt).

EFFECTS OF WORLD WAR II ON BUSINESS FINANCING BY BANKS

During World War II business demand for bank credit was subject to two opposing forces: the stimulative effects of the war production program and the contractive effects of controls and limitations over civilian production not essential to the prosecution of the war. More specifically, expansive factors were the immense war expenditures of the federal government, which rose from an annual rate of $6 billion in the fiscal year 1941 to $90 billion during the fiscal year 1945, and the vast increase in gross national product, from $97 billion in 1940 to about $200 billion in 1944–45. Associated with these forces was the greater volume of output and of inventories, even though expansion of both these elements was limited by contraction in certain lines of civilian goods. Contractive factors were a net decline in the number of operating business concerns, higher ratios of sales to inventory and to receivables, a decline in the production of consumer durable goods between December 1941 and December 1942, and liquidation of consumer credit outstandings, which greatly affected the borrowings of finance companies.

In general, wartime developments in the financial structure of business were such as to forestall any substantial rise in the demand for commercial bank credit. While net fixed assets appear to have declined after 1941, because of rapid depreciation accruals, there was a great expansion in the total plant operated by business, reflecting an increase in gross private plant and in government-owned plant used by business. Between the end of 1939 and mid-1945, an expansion in current assets, owing in large measure to the postponement of replacement and maintenance expenditures and to the retention of earnings, outstripped a rise in current liabilities to the point where net working capital increased about $23 billion.

The principal effects of these developments on the business lending activities of commercial banks can be seen in the movement of business loan outstandings and in the composition of the business loans held by the banking system. Commercial and industrial loans in December 1941 rose to a peak about 45 percent above the amount of such loans at the end of 1939, then declined sharply through

mid-1943, and subsequently advanced again so that at the end of June 1945 they were about 18 percent above the level at the close of 1939. Factors associated with war production programs or with wartime economic controls which served to keep the volume of outstanding business loans only moderately above their 1939 level were advances and prepayments to war contractors, a decline in finance company borrowings which was caused by a reduction in consumer instalment indebtedness, profitability of small and medium-sized concerns which made it possible for them to finance a large part of their asset expansion through the retention of earnings, reduction of financing needs for agricultural crop movements, which reflected transportation shortages, and a reduction in borrowings by trade concerns following the liquidation of trade receivables.

More striking than the changes in the amount of business loan outstandings during the war period was the change in the composition of the business loans held by banks. There was an enormous flow of bank funds into war and out of nonwar uses, a rise in the proportion of bank credit used by large concerns, which were most active as producers of war goods, and sharp increases in bank credit in districts, such as Chicago and San Francisco, where war production activities grew most rapidly.

The other feature of wartime developments in banking that is worthy of special attention is the greater role played by government loan guarantees. When the special risks of the wartime financing process appeared to slow the development of the war production program, they were virtually eliminated by the guaranteed war loan programs; on June 30, 1945 about 18 percent of the commercial and industrial loans of all insured commercial banks were held under at least partial government guarantee. In general, World War II produced an extension of the principle of loan guarantees and caused considerable government activity in the area of business financing through advances and prepayments on war contracts.

EMERGING ROLE OF COMMERCIAL BANKS

Postwar credit demands over the long run will be affected by the same broad factors that have determined the magnitude of business

demands for credit in the past. These are the rate of business asset expansion, the extent to which asset expansion is accomplished through the retention of business earnings, and the decisions of management as to the form in which externally acquired funds are to be taken — whether in equity or in debt, and if the latter whether on a long-, medium-, or short-term basis. However, it is useful to distinguish between those specific factors to which business credit demands are subject over the long run and those of a short-run nature. Over the short run, as the economy accomplishes postwar transition, business credit demands are subject to both contractive and expansive forces. Among the contractive forces are the high wartime liquidity achieved by business; the payments due by government on terminated war contracts; tax refunds and claims and possible tax reductions; and funds recoverable on unamortized emergency plant facilities. Expansive forces include needed reconversion expenditures; expenditures for the expansion, relocation, and improvement of productive facilities; the uneven capacity of business concerns to finance activities from the liquidation of assets and current earnings; credit demands of new businesses; and price increases. The probable strength of these two sets of factors is extremely difficult to judge but, on balance, the factors of expansion seem likely to predominate.

As the long-term factors indicated above make themselves felt in the business credit market, the general environmental conditions within which business financing is conducted will be changed, and the position of commercial banks as business financing agencies will depend in considerable part on their ability to adapt themselves to the changing conditions. While adaptations can be expected, certain factors tend to limit the flexibility of banks in making adjustments to new conditions, notably the persisting environment of economic instability in which all business financing agencies must operate, lower ratios of bank capital to deposit liabilities, the short-term nature of bank deposit liabilities, the risk quality of bank assets other than business loans, regulations affecting bank investment in business securities, examination procedures of bank supervisory agencies, and the operation of legal and conventional conditions affecting maximum loan charges.

Despite these limitations, commercial banks have made significant and effective adaptations in their business lending policies and

practices — adaptations which have been facilitated in some instances by the action of public agencies. Prominent among these are the formulation of specialized loan programs designed to meet the needs of business concerns in all size classes, and a more specific adaptation of the system of correspondent banking relationships to the problems of business financing.

While the manner in which commercial banks function as business financing agencies has undergone significant changes since 1900, there is no evidence of a persisting tendency for the business lending function of commercial banks to decline. On the contrary, this function of the commercial banking system has been expanding since the mid-thirties. Further recovery and expansion will depend upon the rate of growth of the assets of the business enterprise system, the making of effective adaptations to changing conditions in the field of business financing, and the existence of public laws and regulations conducive to risk-taking.

THE PLAN OF THE BOOK

PART I OF THIS STUDY PRESENTS a detailed analysis of the business credit market around 1940 and of the position in that market of the various agencies that serve the credit needs of business. The decision to begin the study with this analysis was made mainly because an understanding of the structure of the business credit market in a selected recent year facilitates the analysis of changes in the relationship between business financing agencies and nonfinancial business since 1900. The magnitude and significance of these changes are more readily understood when related to conditions in a base period. The year 1940 was chosen for this comparison because of the availability of necessary data and because conditions had not at that time been much distorted by World War II.

Part II describes the major changes that occurred in the business credit market over the years 1900–1940. Particular attention is given to developments that affected the credit demands of nonfinancial business, to changes in the relationships among various business lending agencies, and to shifts in lending policies and practices.

In Part III, the analysis of relationships between financial institutions and business enterprises is extended through the years 1940–45 in order to show how these relationships were affected by the war production program and war financing methods.

Finally, Part IV is concerned with the emerging role of commercial banks as business financing agencies, viewed against the background of changing relationships between business finance and banking since 1900.

Part I

BUSINESS CREDIT MARKET IN 1940

Chapter 1

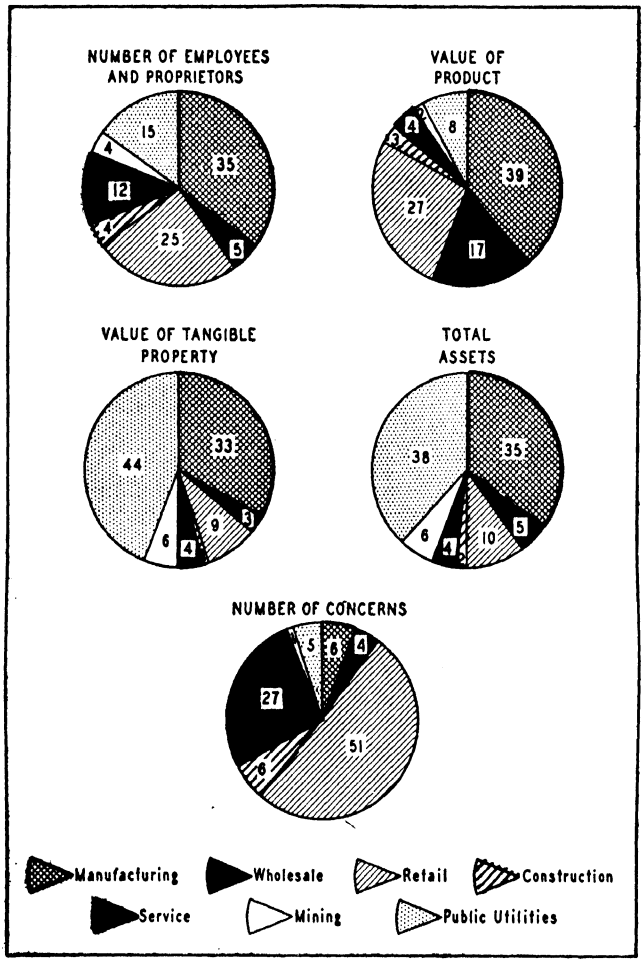
THE NONFINANCIAL BUSINESS COMMUNITY AND ITS CREDIT DEMANDS: 1940

CHANGES SINCE 1900 IN the credit market serving nonfinancial business, excluding agriculture, can be described most effectively when related to conditions in a specific recent year. Furthermore, a study of the relationships between business characteristics and the use of credit in a certain year yields suggestions as to the features of the business credit market which should be examined for evidence of change, and it also provides a basis for weighing the importance of any changes that may be found. A base year that is particularly appropriate for the present study is 1940. By that time the effects of the depression of the thirties on the business community and its credit demands could be appraised; in addition, economic conditions in the United States had not been distorted to any great extent by World War II. This chapter, therefore, outlines the composition of American business around 1940, and its asset and liability structure and financial policy as they affect the demands of business for credit. The succeeding chapter measures both the short-term and long-term elements in the supply of credit at that time, and indicates the role of the commercial bank in the credit supplying process.

COMPOSITION OF THE NONFINANCIAL BUSINESS COMMUNITY

At the outbreak of World War II there were about 3.4 million independent nonfinancial business enterprises in the United States, of which nearly 1 million were one-man owner-operated ventures. Their consolidated total assets, including net ownership or creditorship claims upon consumers, governments, agriculture, and financial institutions, as well as tangible assets, amounted to more than $166

Chart 1 — COMPOSITION OF THE NONFINANCIAL BUSINESS COMMUNITY, 1939
(*in percent*)



Among the major industrial divisions, manufacturing had the largest fraction of personnel and value of product, public utilities the largest share of tangible property and total assets, and retailing the largest number of concerns.

billion. These enterprises provided a livelihood for more than half of the 46 million people who were gainfully employed, although they formed only about one-third of the total number of private undertakings in the nation; the six million farm enterprises accounted for the remaining two-thirds. Chart 1 describes the industrial composition of the nonfinancial business community at the beginning of the war period, in terms of number of personnel employed, value of output, value of tangible property, total assets, and number of concerns.[1]

Table 1—PERCENTAGE DISTRIBUTION OF ESTIMATED NUMBER OF NONFINANCIAL BUSINESS CONCERNS IN MAJOR INDUSTRIAL DIVISIONS, BY ASSET SIZE OF CONCERN, 1939[a]
(*dollar figures in thousands*)

Asset Size	*Manufacturing*	*Wholesale Trade*	*Retail Trade*	*Construction*	*Service*	*Total*
Under $250	88.5%	93.7%	99.5%	99.6%	99.6%	98.6%
250–5,000	10.7	6.1	.5	.4	.4	1.3
5,000 and over	0.8	0.2	[b]	[b]	[b]	.1
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Estimates of the National Bureau of Economic Research, Financial Research Program, based on data from U. S. Department of Commerce, Bureau of the Census, *Census of Business, 1939* and U. S. Treasury Department, *Statistics of Income for 1939*, Part 2.

[b] Less than one-tenth of one percent.

The nonfinancial business community was made up of a vast number of small concerns and relatively few large ones — whether size is measured by the total assets a business employs, by the number of its employees, or by the annual volume of its sales. For a study of the financing of businesses, it is convenient to group enterprises into size classes according to the amount of their total assets. Therefore in this study, unless otherwise indicated, "small" businesses will mean concerns with total assets under $250 thousand; "medium-sized" businesses, those with total assets of $250 thousand to $5 million; and "large" businesses, those with total assets of

[1] Sources of data for all charts included in this study are given in the Appendix, pp. 221–23. Sources of figures given in the text may be found on pp. 224–29.

$5 million and over. A fourth category of "very small" businesses with total assets under $50 thousand may be useful for some purposes. The predominance of the small concern among the total number of business enterprises is indicated by the estimates for 1939 presented in Table 1.

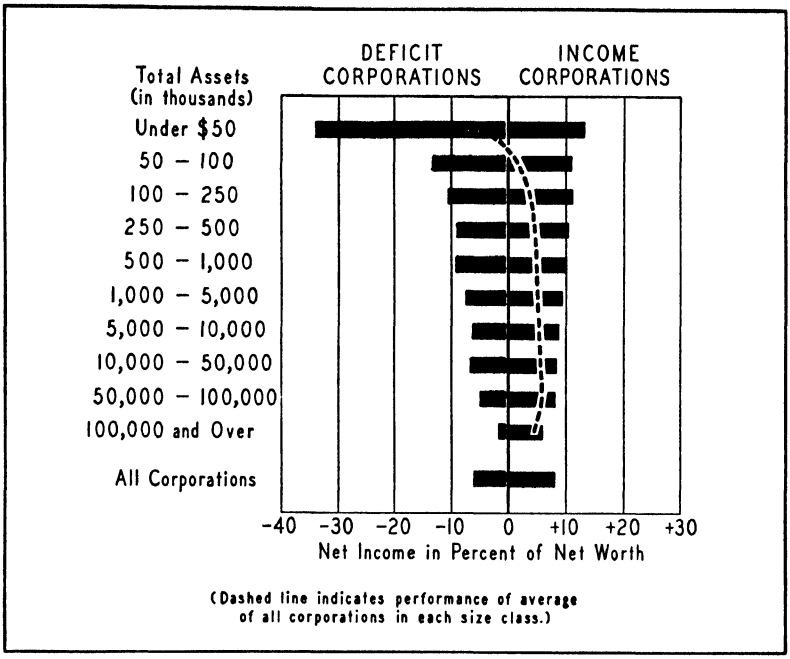
PROFITABILITY CHARACTERISTICS OF NONFINANCIAL BUSINESS AND THEIR EFFECTS ON THE BUSINESS CREDIT MARKET

Examination of concerns of varying asset size reveals that the profitability of business, measured by the average rate of return on the equity of owners, becomes progressively higher as asset size of business increases. After studying the relation between corporate size and earning power during the period 1931–36, Professor W. L. Crum concluded that "on the average, large enterprise — in all or nearly all broad lines of industry, and in different stages of the economic cycle — is more profitable than small enterprise, especially very small enterprise." When unprofitable enterprises were separated from profitable ventures, however, the range of profitability and unprofitability diminished with striking consistency as corporate size increased. In other words, both the highest profit rates and the highest deficit rates were found among small concerns.[2] In many cases big business is really an agglomeration of numerous small ventures whose successes and failures average out into a comparatively narrow range of profitability.

The relationship between size and profitability, shown in Chart 2, emphasizes two features of the business credit market. First, the erosion of funds as a result of operating losses, which gives rise to urgent and persistent financing demands, was relatively most important among small and medium-sized enterprises. Second, the enormous range in operating results among small concerns, due in part to their large number, and the greater temporal instability in the earning power of individual small concerns, made the risks of lending to small and medium-sized businesses many times greater than those of lending to large enterprise.

[2] See William Leonard Crum, *Corporate Size and Earning Power* (Cambridge, Mass., 1939) pp. 7 and 31.

Chart 2 — RELATION OF SIZE TO PROFITABILITY, NONFINANCIAL BUSINESS CORPORATIONS, 1936



As asset size of business increased, the range of profitability and unprofitability diminished. Both the highest profit rates and the highest deficit rates were found among small concerns. For income and deficit corporations combined, the *average* rate of profitability improved as size increased.

SIGNIFICANCE TO THE CREDIT MARKET OF CHANGES IN THE BUSINESS POPULATION

Another factor of significance to the business credit market is the rapidity with which the business population changes through time. Estimates indicate that the number of completely new business concerns established each year during the period 1936 through 1940 averaged 160,000, although an additional 270,000 concerns annually acquired some element of newness through succession

or extension of operations.[3] In view of the negligible changes in the total number of business enterprises between 1925 and 1940, the over-all average "life expectancy" of a completely new American business at that time could be put at about fourteen years. But this average means little because of vast differences between the "life expectancies" of old and large enterprises, on the one hand, and new and small ones, on the other. Scattered studies indicate that approximately one-quarter to one-half of all new ventures in various retailing lines discontinue operations within a year after starting; they also reveal that average life increases steadily with size in all industries.[4] The high rate of turnover among small enterprises largely explains why special techniques of credit extension are applied in meeting their credit demands. It means that lenders frequently take liens on assets or apply other methods of assuring repayment of loans in the event of unexpected discontinuance.

RELATION OF BUSINESS ASSETS TO THE CREDIT MARKET

The types of assets held by nonfinancial business concerns strongly influence the amount and kind of their demands for credit. When all assets are divided, for convenience, into the three categories of fixed assets (including land, plant, and equipment), investments in other companies, and current assets (including cash and equivalent, receivables, and inventory), certain broad features of asset structure around 1940 may be noted.[5] No "normal" or typical pattern of assets for all business enterprises is apparent, but there were characteristic asset structures for businesses of particular industries, sizes, and degrees of profitability.

Of prime importance are the ratios of fixed and of current assets to total assets.[6] In 1939 the fixed assets of all nonfinancial concerns

[3] Alfred R. Oxenfeldt, *New Firms and Free Enterprise: Pre-War and Post-War Aspects* (Washington, 1943) p. 48.

[4] *Ibid.*, pp. 174, 176.

[5] For an extensive analysis of corporate financial structure, based on 1937 data, see Walter A. Chudson, *The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937* (National Bureau of Economic Research, Financial Research Program, 1945). This section relies heavily on Dr. Chudson's analysis.

[6] It must be recognized that the dollar values of fixed assets on the books of business corporations often do not measure the *present worth* of fixed assets vis-a-vis current assets, because of property write-ups and write-downs, changes in the price level, and other factors.

(on an unconsolidated basis and excluding agriculture) constituted 53 percent of their total assets, with the ratio of fixed to total assets varying considerably among the major industrial divisions. (See Chart 3.) For manufacturing concerns the ratio was 37 percent, for retail trade concerns 26 percent, and for wholesale trade 10 percent, while in certain other divisions of business, notably public utilities (including railroads), the importance of fixed assets was much greater. As size of business increased, fixed assets as a proportion of total assets became more important, and current assets less important.

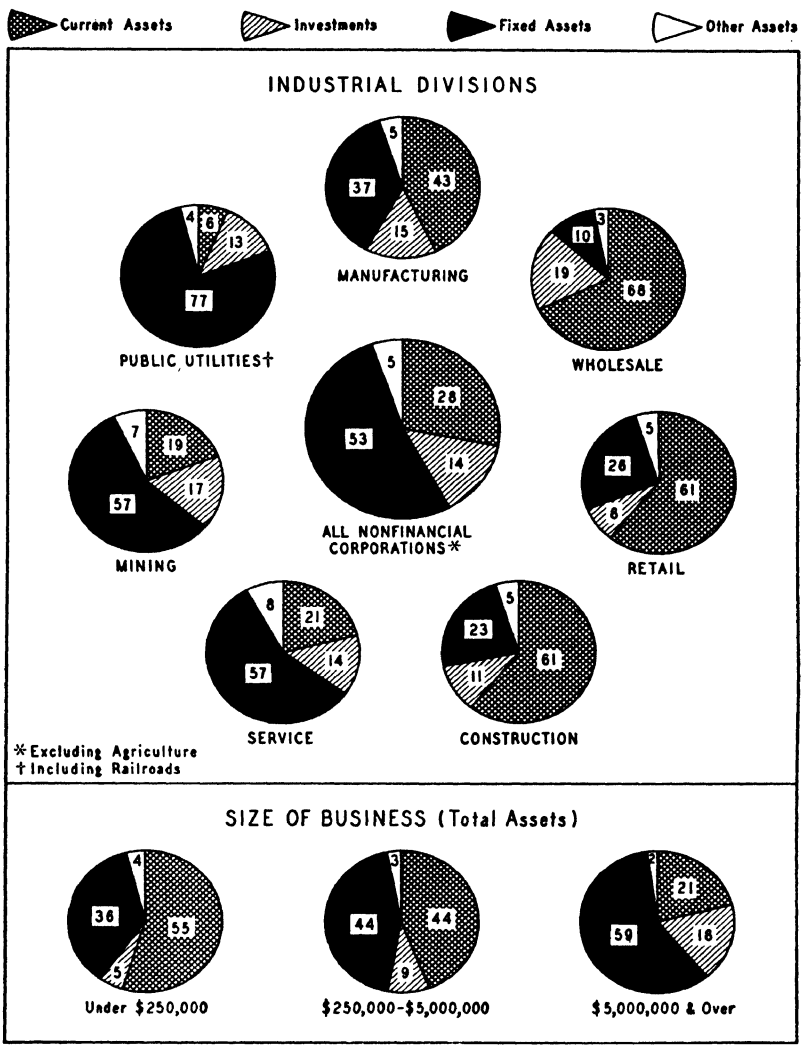
Investments in other companies, like fixed assets, increased in relative importance with size of business (Chart 3). The concentration of investments among business corporations of large size may indicate, among other things, that large businesses tend to finance the needs for long-term funds of other businesses, including small firms, just as they provide much short-term credit to small concerns through the medium of accounts receivable.

Cash and its equivalent (marketable securities) is universally a major item among business assets. Trading concerns understandably carry a larger proportion of their total resources in cash than do manufacturing or public utility concerns. The ratio of cash to total assets falls with size of business, measured in total assets, but when marketable securities are added to cash, the ratio for the combined total varies only slightly as corporate size increases. When corporate size is measured by annual sales, there is a distinct tendency for the larger concerns to hold greater fractions of their assets in the form of cash and its equivalent.

Accounts receivable are among the most liquid and therefore the most bankable of business assets. At the end of 1939 nonfinancial business corporations as a group had $15.0 billion of receivables and only $11.4 billion of payables outstanding, showing that they were extending $3.6 billion of net trade credit to unincorporated businesses and to consumers. While the receivables/sales ratios of the various industries differed widely, they were generally higher in the producers' goods industries than in the consumers' goods industries.

Inventory also is a highly bankable current asset. Ratios of inventory to either sales or total assets varied considerably among industries, but they were relatively high in manufacturing and in

Chart 3 — ASSET STRUCTURE OF NONFINANCIAL BUSINESS CORPORATIONS, 1939
(*in percent*)



Fixed assets in 1939 were a major fraction of total assets in the public utility, mining, and service divisions. Current assets comprised the greatest proportion of total assets in manufacturing, wholesaling, retailing, and construction. For business as a whole, the relative importance of fixed assets increased with size of business.

trade, industrial divisions that hold the preponderance of all inventory of the economy. The ratio of inventory to sales for most manufacturing industries exhibited a marked and consistent tendency to rise with corporate size, reflecting the tendency for big business, because it usually combines a number of production processes under one management, to turn over its inventory more slowly than small business.

In summary the available data indicate that the asset structure of the major industries varied considerably in the period preceding World War II. Further, when concerns of different size are compared, fixed assets and investments are found to have been of more importance and current assets of less importance as size increased. As a consequence, the credit demands of large concerns tended to be greater, relatively, for long-term than for short-term funds. A broad picture of these variations is afforded by the data presented in Table 2.

CREDIT VERSUS EQUITY IN BUSINESS

The funds employed in a business enterprise are either owned or borrowed. The debt of a business represents dollar claims of definite amount against the income and assets of the business, while the equities represent the remaining values in the enterprise belonging to the owners. The amount of risk borne by the two classes of claimants differs considerably, that carried by the owners being the greater. Some investment by owners is clearly essential to business birth and is generally an indispensable condition to the incurrence of debt. Lacking equity, a business could not provide to creditors that preferred position in the scale of risks which is the very essence of creditorship.[7]

At the outbreak of World War II, as in the entire period 1900–1940, ownership capital claimed the preponderance of business assets. No less than 62 percent of the total assets employed by all nonfinancial business corporations (excluding agriculture) was financed with ownership funds, and only 38 percent with debt funds at the end of 1939. Comparable information is not available for

[7] In unusual cases an established business may have no net worth, and still may operate profitably. But it is scarcely likely that a concern can contract a new loan without possessing some ownership values.

Table 2 — COMPARISONS OF RATIOS OF SELECTED ASSET ITEMS TO TOTAL ASSETS AND TO SALES OF NONFINANCIAL BUSINESS CORPORATIONS, BY INDUSTRY, SIZE, AND PROFITABILITY, 1937[a]

Asset Item	*Industry Variation* Low	High	Median	*Movement of Ratio as Size of Corporation Increases*	*Ratio for Profitable Compared with Unprofitable Corporations*
In Percent of Total Assets					
Cash	1.4	13.0	6.2	Falls	Profitable — higher
Government securities	.1	4.9	1.8	Rises	Profitable — higher
Cash plus government securities	3.3	16.7	8.2	Irregular	Profitable — higher
Receivables	5.5	37.9	13.7	Falls	Little difference
Inventory	.5	47.5	22.7	Irregular	Little difference
Fixed property assets[b]	4.9	74.4	34.6	Rises	Profitable — lower
Other investments	5.3	25.6	12.6	Rises	Little difference
In Percent of Sales					
Cash plus government securities	1.7	19.6	7.7	Rises	Profitable — higher
Receivables	4.9	28.0	12.7	Mfg. — irregular Trade — rises	Little difference
Inventory	4.7	38.5	18.2	Mfg. — rises Trade — irregular	Little difference
Fixed property assets[b]	3.8	186.3	30.6	Mfg. — rises Trade — irregular	Profitable — lower
Current Ratio	.6/1	5.1/1	2.5/1	Mfg. — rises Trade — irregular	Profitable — higher

[a] From Walter A. Chudson, *The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937* (National Bureau of Economic Research, Financial Research Program, 1945) Chapter 1, Tables 1 and 2, pp. 8 and 10. Based on analysis of data from *Statistics of Income*. Variations studied are among 61 subdivisions of the following major industrial divisions: manufacturing, trade, construction, shipbuilding, and mining and quarrying.

[b] In *Statistics of Income* the term "fixed capital assets" is used in place of "fixed property assets."

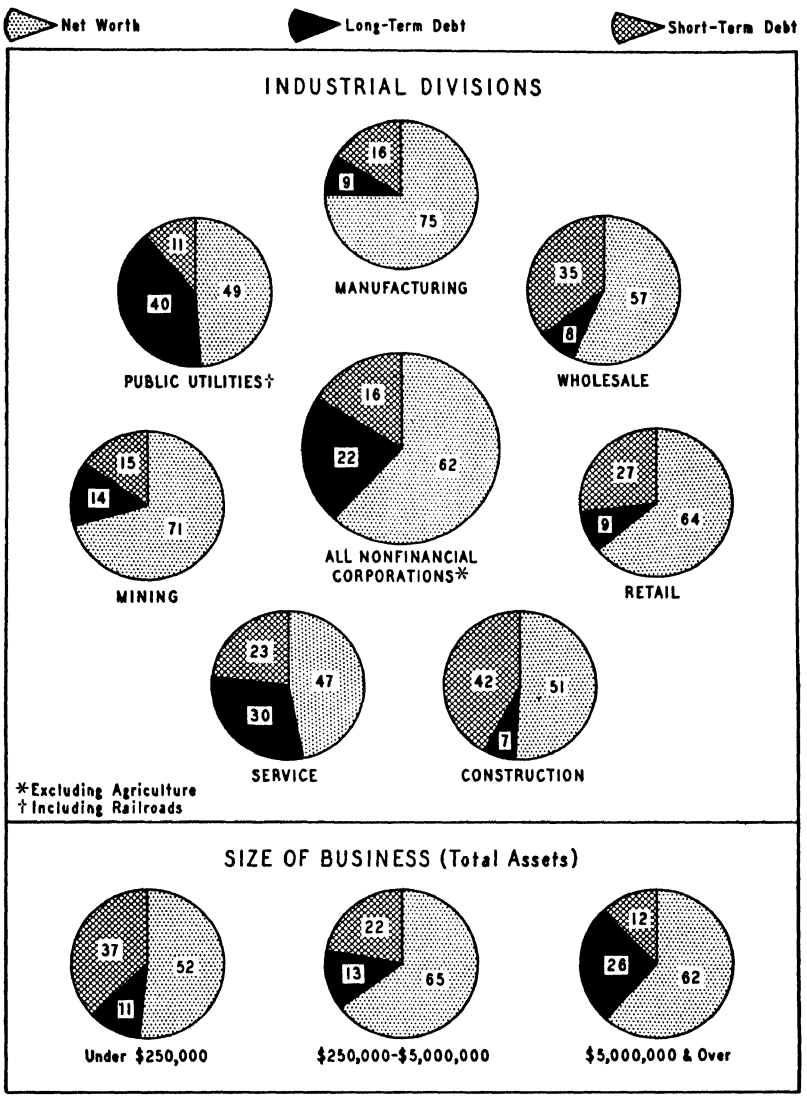
unincorporated businesses, but sample data show that the average proportion of equity for them was greater than for corporations, in part reflecting the fact that these businesses are principally small and very small concerns for which the ratio of equity to total assets is typically high.[8] Broadly speaking, for each dollar of credit it demanded, business management sought about two dollars of ownership capital. Ownership funds were more than equivalent to the total investments of businesses in fixed assets, and covered a substantial portion of their current assets.

Among major industrial divisions there were stable and clear-cut differences in the relative importance of debt. In manufacturing, debt comprised about 25 percent of total liabilities in 1939; in retail and wholesale trade, it formed about 35 and 45 percent, respectively; in construction, it amounted to about 50 percent; in public utilities (including railroads) and in the service industries it comprised more than half of all liabilities (Chart 4).

The size of a business also was a major determinant of its relative use of equity and debt financing. Among the asset-size classes shown in Chart 4, the highest indebtedness in proportion to total assets in 1939 is found in the class of concerns with total assets of less than $250 thousand. Broadly speaking, ownership was large and debt was small for very small enterprises (i.e., those with total assets of less than $50 thousand, not shown separately in Chart 4) and for large enterprises other than public utilities. Breadth of access to financial markets is an important factor in explaining this behavior. Very small concerns may have high fractions of equity simply because they are unable to borrow, are unwilling to borrow on the credit terms available to them, or have no desire to expand. Small and medium-sized concerns (with assets from $50 thousand to $5 million), having greater accessibility to credit than to equity funds, are more likely to finance their activities through loans. Large businesses can make public offerings of equity securities readily, and in addition they have a higher and more stable average profitability which enables them to build up equity and pay off debt by retaining earnings in the enterprise. Another reason for the greater importance of equity in businesses of large size may be the

[8] Carl Kaysen, *Industrial and Commercial Debt — A Balance Sheet Analysis, 1939* (National Bureau of Economic Research, Financial Research Program, ms. 1942) p. 14.

Chart 4 — LIABILITY STRUCTURE OF NONFINANCIAL BUSINESS CORPORATIONS, 1939
(*in percent*)

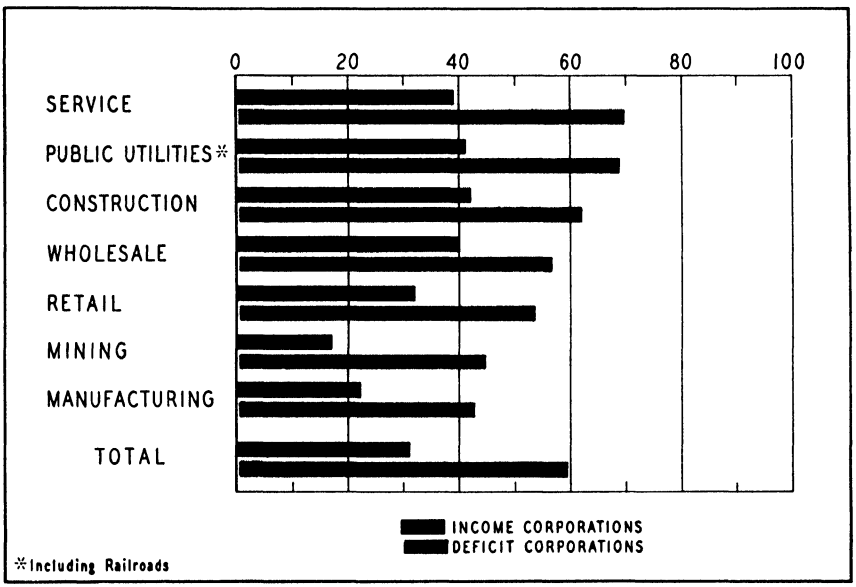


For corporate business as a whole, net worth at the outbreak of World War II was the preponderant source of funds. In the public utility and service industries, however, debt accounted for the major fraction of funds.

direct correlation between size and age of enterprises; large businesses, being older, may have relatively more equity funds simply because they have had more time to accumulate equity through retention of earnings than have smaller concerns.

Profitability of business has affected its use of credit to an important degree. Profitable concerns have had much lower ratios of debt to total assets than have unprofitable concerns. In 1939 the profitable concerns in every major industrial division were 15 to 30 percent less indebted than were unprofitable businesses of the same size (Chart 5). The current liabilities of unprofitable concerns as a whole were substantially greater in relation to both total assets and sales than were those of the profitable ones, both their borrowings and their accrued liabilities being heavier. Invested

Chart 5 — DEBT IN PERCENT OF TOTAL ASSETS, NONFINANCIAL BUSINESS CORPORATIONS, 1939



In every major division of industry in 1939, income corporations had less indebtedness in proportion to their total assets than did deficit corporations.

capital formed a definitely smaller proportion of total liabilities of the unprofitable concerns, a condition resulting almost wholly from the smaller proportion of surplus accumulated by them. These findings are in no wise peculiar to 1939 or 1940. It is a matter of common observation that when the profitability of a business concern declines, its trade payables are allowed to rise and its bank loans are renewed rather than paid off. When operating losses occur they reduce the owners' equities, thus enlarging, on a relative scale, the indebtedness of the business. In either case a higher ratio of debt to equity emerges as a more or less automatic or passive response to the situation. The fact that owned funds play a more important role in large and in profitable enterprises than in moderately small or in unprofitable ones also reflects in part the high degree of direct association between size and profitability — a relationship that was commented on above.

THE PRINCIPLE OF "TRADING ON THE EQUITY"

What determines the relationship between debt and equity funds in a business managed so that profits to owners will be maximized? Theoretically, the assets a business could profitably employ would be acquired with borrowed money up to the point where the interest rate on the last increment of debt equaled the rate of profit realized from employing these funds in the enterprise. In other words, credit would be used in a business so long as it could be obtained more cheaply than equity funds.

This familiar principle of "trading on the equity" does not provide a complete and realistic description of entrepreneurial behavior around 1940. Businessmen did, of course, make comparisons between the expected payments they would have to make on new equity funds and those they would have to make for loans, in determining how they should obtain new funds. But other factors generally appear to have weighed more heavily in their decisions. In nearly all businesses the fluctuations of earnings and the probabilities of loss were difficult to evaluate quantitatively, but losses could cause the fixed charges of debt to become embarrassing. As a result, management in many cases apparently had developed a predisposition against borrowing which often produced a structure of liabilities that could not be explained merely by reference to

cost differentials. Borrowing — particularly on short term — was regarded as a seasonal or emergency measure, and not as a normal and continuing source of funds. Furthermore, standards of prudence in lending required that a margin of equity funds be present in the financial structure of a potential borrowing concern.

Apart from this, the institutional structure and traditions of finance bore heavily upon the equity-debt relationship. Many concerns desired equity funds, but found the equity securities markets closed to them or accessible only on terms they could not profitably accept, and they utilized credit for lack of an alternative. Enterprises with large fixed properties, such as railroad and public utility concerns, even when they could obtain equity funds, pursued a tradition accepted by financial institutions of borrowing substantial percentages of the appraised value of these properties against mortgages. During the period between the two world wars, many railroads could not lawfully sell additional stock, because their outstanding equity securities sold for less than their par values. Consequently, they were compelled to borrow the funds they needed. The anticipations of entrepreneurs and investors regarding the future earnings of a concern also affected the nature of its financing. Federal taxation strongly influenced the choice between debt and equity funds, generally favoring the incurrence of debt because interest was a business expense deductible from taxable income, while dividends were not. Large concerns had a wide range of options in adjusting their financial structure to these conditions, a fact which is reflected by data showing that the complexity of corporate financial structure increases with business size.[9] In summary, no simple statement can encompass all the forces that determined the division of the liabilities of businesses of different types and sizes between creditors and owners in 1940.

[9] W. A. Chudson, *op. cit.*, p. 108.

Chapter 2

COMMERCIAL BANKS AS SUPPLIERS OF CREDIT TO NONFINANCIAL BUSINESS: 1940

IT IS USEFUL TO THINK of the American business credit market as being composed of two divisions, one concerned with short-term credit running for one year or less, and the other with medium-term and long-term credit running more than one year to maturity. The principal forms of short-term credit appearing on business balance sheets are accounts payable and notes payable due in one year or less, while the major forms of medium-term and long-term credit are term loans due in more than one year, bonds, debentures, and mortgage loans. Each class of indebtedness represents obligations due to a variety of creditors. In 1940 commercial banks were an important source of medium- and long-term as well as of short-term business credit, although they were not the major source of either type of credit.

SHORT-TERM VERSUS MEDIUM-TERM AND LONG-TERM BUSINESS CREDIT

While the technical distinction between medium- and long-term and short-term credit is based upon the term to maturity of the loan, one year being the dividing line, the true economic distinction is grounded on the nature of the business transaction being financed. For example, businesses whose operations are subject to strong seasonal influences are ordinarily large users of short-term credit obtained to finance seasonal bulges in their operations. In practice, however, there is no sharp divergence in the uses to which either class of credit is put by business concerns. Loans that are technically of short term may be used to finance fixed assets or long-sustained operations, and medium- and long-term loans may be used in part to finance temporary transactions.

Both loan markets are characterized by competition among particular sets of credit agencies. The two markets differ in credit appraisal methods and standards. In lending on short term, credit institutions tend to place greater reliance on the balance sheet of the borrowing business in order to determine whether liquidation of current "trading" assets is likely to produce sufficient funds to pay off the debt. In lending on medium or long term, greater emphasis is given to the earning power of the concern over a period of years, and its ability to "throw off" cash to service the debt.

In 1939 the short-term debt (defined here as equivalent to the current liabilities) of all American nonfinancial corporations amounted to $23 billion on a nonconsolidated basis.[1] Their gross outstanding long-term debt, on the other hand, was $33 billion, or about 45 percent more than the short-term obligations. More than half of the short-term debt was owed by manufacturing and trading concerns; nearly nine-tenths of it by these corporations plus public utility companies (including railroads). As for long-term debt, more than 70 percent was owed by railroad and other public utility companies, whose assets consisted primarily of fixed property.

Data for 1937 indicate that the proportion of assets financed by short-term debt declined quite sharply as size of corporation increased up to businesses having total assets of $5 million. But this tendency for the importance of short-term debt to shrink with increasing size of business was not offset by an expansion of the ratio of long-term debt to total assets, except among large businesses with total assets of $5 million and more, and among public utility companies. As between profitable and unprofitable corporations, variation in the use of short-term debt was very striking, the ratio

[1] Short-term and long-term business credit outstanding at any time can be measured only imperfectly. First, credits written to run a year or less are renewed frequently, and may be regarded by both borrower and lender as long-term loans. This produces a bias toward understatement of real long-term credit in available financial statistics. Second, business concerns customarily include among their current liabilities those instalments of a long-term debt that fall due within the ensuing fiscal year. This introduces a bias in the opposite direction. Third, short-term debt at statement date may be less than the year's peak because of the tendency to repay loans at that time and to use a fiscal year ending in a period during which short-term credit needs are at a minimum. Finally, business balance sheets fail to classify either short- or long-term debts as between types of creditors, which precludes direct measurement of their relative importance. While "accounts payable" may be presumed to measure debt due to trade suppliers, "notes payable" cover debt due to commercial banks, commercial finance companies, affiliated companies, trade suppliers, stockholders, or other agencies.

of current liabilities to total assets for unprofitable businesses being 40 to 50 percent higher than for profitable concerns.

What general explanation can be offered for the particular maturity distributions of debt found among business enterprises? Why do business concerns not borrow entirely on short term or entirely on long term?

Part of the answer to this question is provided by a study of the kinds of assets employed by businesses and their variability in value through time. Long-term credit demands are related to the ownership of fixed property, and short-term credit requirements are related to the volume of current assets and transactions. If the technology of a business is such that the amount of its assets varies considerably within short periods — a probable situation where current assets form a large proportion of total assets — the use of short-term debt is likely to be relatively larger than where total assets are comparatively stable. But the correlation of large current debt with large current assets in various industries is so imperfect as to indicate that the term structure of business debt is far from being controlled by the term structure of assets. The considerations affecting the division of the debt of a particular concern between short- and long-term obligations are not easily fitted into a neat formula. They may be described, in general, as considerations of technology, alternative cost, urgency, and flexibility.

SOURCES OF SHORT-TERM CREDIT TO BUSINESS

Three categories of short-term business liabilities can be distinguished: *trade credit* obtained by a concern from other businesses that supply it with inventories or, less frequently, with machinery or equipment; *commercial credit* obtained from banks, finance companies, governmental loan agencies, or other financial institutions; *"other" current liabilities* represented by the accrued obligations of a concern to tax collectors, insurance companies, or other agencies, and notes due to owners, stockholders, or other nonprofessional lenders. The significance of this division lies in the difference in the terms upon which each type is available and in the circumstances of its use. Trade credit is associated directly with the purchase of merchandise or services; commercial credit involves the formation of a relationship with a lending institution in the financial

Table 3 — ESTIMATED PERCENTAGE DISTRIBUTION OF CURRENT LIABILITY ITEMS OF NONFINANCIAL BUSINESS CONCERNS, BY MAJOR INDUSTRIAL DIVISIONS, 1939[a]

Industrial Division	*Trade Debt*	*Bank Debt*	*Amounts Due Individuals*	*Chattel Mortgages*	*Miscellaneous Current Liabilities*	*Accrued Liabilities*	*Total Current Liabilities*
Manufacturing	42.9%	17.2%	13.6%	1.0%	5.6%	19.7%	100.0%
Wholesale trade	64.0	18.5	10.5	.4	2.9	3.7	100.0
Retail trade	40.8	17.5	11.2	18.9	5.8	5.8	100.0
Construction	57.5	16.3	11.3	.5	7.7	6.7	100.0
Service	31.5	17.7	10.5	19.4	7.3	13.6	100.0
COMBINED	44.0%	17.4%	12.5%	5.7%	5.6%	14.8%	100.0%

[a] Based on data in Carl Kaysen, *Industrial and Commercial Debt — A Balance Sheet Analysis, 1939* (National Bureau of Economic Research, Financial Research Program, ms. 1942) Table A-1, which was compiled from a sample of about 6,200 concerns.

market; "other" current liabilities involve loans from agencies likely to be influenced by special considerations in assuming a creditorship position, and accrued expenses, such as taxes or insurance, chargeable to past operations but not yet due.

PREPONDERANCE OF TRADE CREDIT

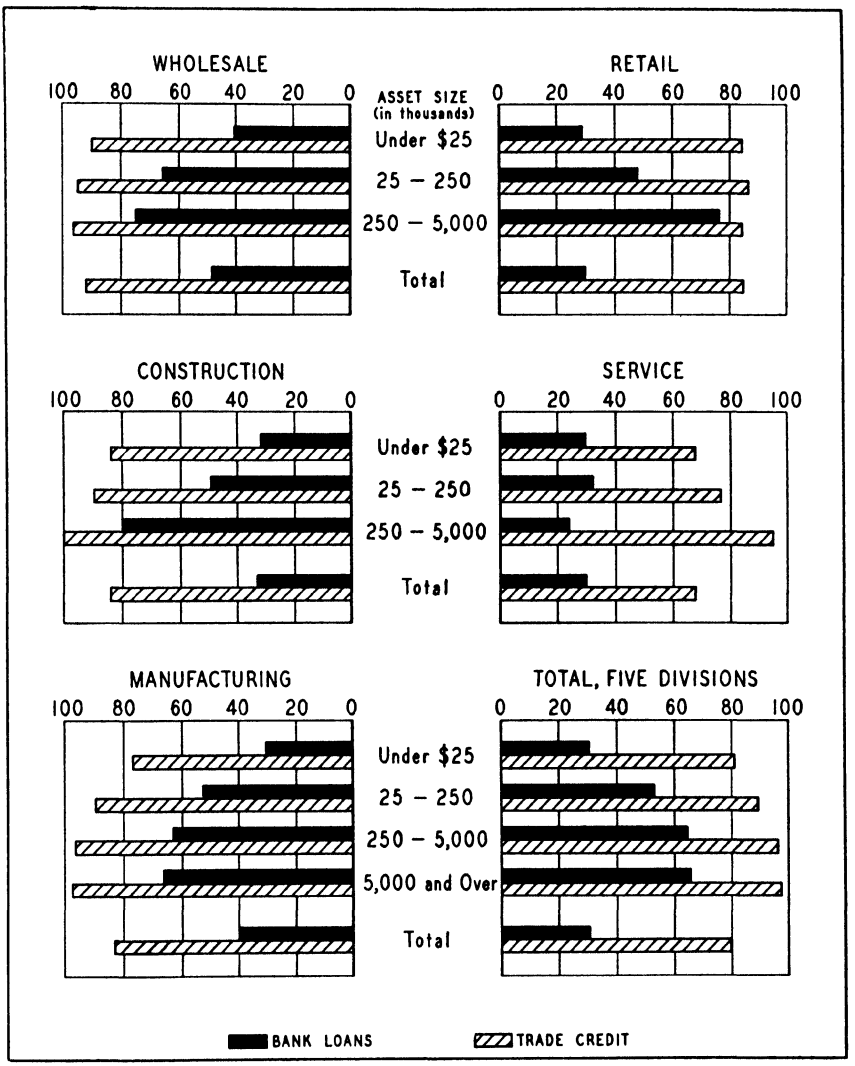
Quantitatively trade credit is the most important type of short-term business credit in every major industrial division of the non-financial economy (Table 3). In 1939 trade debt was about two and one-half times as large as bank debt for manufacturing, trade, construction, and service industries combined.[2]

Furthermore, because of its role in current transactions, trade credit is found in the balance sheets of businesses with far greater frequency than is bank credit (Chart 6). Irrespective of size, degree of profitability, or kind of industry, an overwhelming majority of businesses showed accounts payable on their balance sheets at the end of 1939: in wholesaling, 92 percent; in manufacturing, 83 percent; in retail trade, 85 percent; in construction, 84 percent; and in the service industries, 68 percent. The frequency of use of trade credit rose steadily with size of concern in all major industrial groups, probably because big businesses purchased on credit from a larger number of suppliers than did small concerns and were more likely to be using *some* trade credit at any given time.

While perhaps 80 percent, or 2.7 million, of the 3.4 million non-financial businesses at the outbreak of World War II had outstanding trade debt, only about 35 percent, or not more than 1.2 million, of them had outstanding debt to financial institutions — mainly to commercial banks. Because, as indicated above, the ratio of trade debt to bank debt was approximately two and one-half times in manufacturing, trade, construction, and service industries combined,

[2] Debt to business suppliers outweighed bank debt by 3.6 to 1 in construction; in wholesaling the ratio was 3.4, in retailing 2.8, in manufacturing 2.5, in service 1.7, and for all five divisions combined it was 2.6. See Carl Kaysen, *Industrial and Commercial Debt — A Balance Sheet Analysis* (National Bureau of Economic Research, Financial Research Program, ms. 1942) p. 30. For public utilities and extractive industries the data suggest that trade credit was more than double the amount of outstanding bank credit. See Sidney S. Alexander, *Changes in the Financial Structure of American Business Enterprise, 1900–1940* (National Bureau of Economic Research, Financial Research Program, ms. 1943) Table 9, p. V-8. Unfortunately, Alexander's data compare accounts payable with notes payable, and a substantial fraction of the latter evidences debts owed to agencies other than banks.

Chart 6 — FREQUENCY OF SHORT-TERM DEBT AMONG NONFINANCIAL BUSINESS CONCERNS OF DIFFERENT ASSET SIZES, 1939
(in percent of all concerns in each size class)



Only one-third to one-half as many nonfinancial businesses used bank credit as used trade credit. The relative frequency of use of both forms of credit was especially high in manufacturing, wholesaling, and construction. In the five major industrial divisions combined, frequency of use rose with asset size of business.

it appears that for the average business utilizing both types of short-term funds the average amount of trade credit was in excess of the amount of its bank loans. For the major industrial divisions, there was substantial correlation between the frequency of use of trade credit and of bank credit. This correlation suggests that bank borrowing was used by business management in most cases to supplement other sources of short-term credit, and not to substitute for that obtained from business suppliers.

What is the explanation of the fact that about two and one-half times as many businesses used trade credit as used bank credit, and in amounts about two and one-half times as large? The answer is not simple. A substantial part of outstanding trade credit was "float," representing sums due to trade suppliers which were in process of payment at the time balance sheets were drawn. A considerable amount of trade debt was also incurred more or less "automatically" by business managements as a matter of purchasing convenience, and in the case of unprofitable concerns as a matter of necessity. Apart from these factors, the relative uses of trade credit and bank credit appear to have been related to the size, industry, and technology of business concerns. Thus large concerns (i.e., chain stores and mail-order houses) purchasing from small suppliers tended to have low levels of accounts payable, as did concerns purchasing standardized commodities in well-organized markets (i.e., millers, meat packers, and tobacco manufacturers). Nevertheless, taking the economy as a whole, industries that used relatively large amounts of trade credit also used relatively large amounts of short-term bank credit, indicating the existence, commented upon above, of a complementary rather than a competitive relationship between the two sources of credit.

BUSINESSES USING SHORT-TERM BANK CREDIT

A telescopic view of the short-term business borrowing clientele of commercial banks around 1940 would result in the "typical" borrower being described roughly in these terms: It was a small or medium-sized manufacturing or trading concern, of somewhat less than average profitability, which tended to borrow repeatedly in a succession of years.

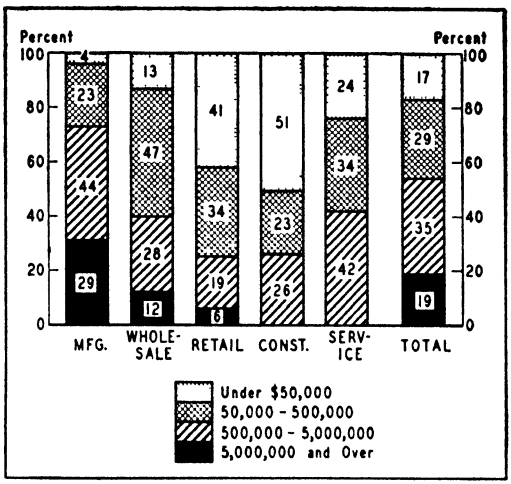
While there is no direct information on the industrial distribu-

tion of short-term bank credit around 1940, collateral information from several sources leads to the conclusion that manufacturing and trading enterprises were the two most important categories of business borrowers from commercial banks. Together they accounted for more than half of all outstanding "commercial and industrial" loans. Miscellaneous finance companies — mainly personal loan and sales finance organizations — accounted for another sixth to a quarter of these loans; public utility concerns for an additional 15–20 percent; and the balance were scattered among service, construction, and miscellaneous industries.

Small and medium-sized enterprises accounted for the preponderance of outstanding short-term bank loans in all industrial divisions, except public utilities and miscellaneous finance where large-scale enterprise tended to predominate. A sample of business concerns in five industrial divisions indicates that in 1939 no less than 71 percent of the amount of all bank loans to manufacturing concerns was owed by concerns with total assets under $5 million (Chart 7). The analogous figure was 88 percent in wholesaling, 94 percent in retailing, and about 100 percent in construction and service, with an over-all figure for the five divisions combined of 81 percent.

Analysis of the "notes payable" in 1937 of all nonfinancial business corporations generally

Chart 7 — PERCENTAGE DISTRIBUTION OF SHORT-TERM BANK DEBT OF NONFINANCIAL BUSINESS AMONG CONCERNS OF DIFFERENT ASSET SIZES, 1939



For each of the five major industrial divisions considered here, except construction, businesses with assets of $50,000 to $5,000,000 accounted for the bulk of the short-term bank debt. In construction, the largest percentage of short-term bank debt was used by concerns with assets of less than $50,000.

confirms the view that "big business" was a minor element in the short-term credit clientele of banks, small and medium-sized corporations with assets under $5 million accounting for 61 percent of all notes payable, although only 30 percent of corporate assets and 53 percent of corporate sales were attributable to this group. A survey of commercial and industrial loans made by Federal Reserve member banks during one month of 1942 shows that 71 percent of the amount of such loans went to small and medium-sized businesses.

Unprofitable businesses showed relatively larger amounts of bank credit on their balance sheets than did profitable concerns, both because losses reduced equity and automatically increased the relative importance of bank debt, and because lack of profits reduced the ability to pay off outstanding bank debt. Nearly 60 percent of all nonfinancial corporations reported no taxable net income during 1937. These concerns accounted for but 22 percent of the gross income of all corporations in that year, but they owed 43 percent of the amount of notes payable.[3] The percentages of notes payable to total assets at the end of 1937, for income and deficit corporations of different sizes, reveal a markedly greater indebtedness for small than for large corporations, as well as heavier indebtedness for the unprofitable businesses of each size-group (Table 4).

Roughly two-thirds of the business concerns receiving credit from a bank at a given time might have been expected to be in its debt during the following year according to 1939 data for a sample of companies. This may be inferred from the fact that 64 percent of the sample indebted to banks were either "steady" or "seasonal" borrowers, while only 36 percent were "occasional" borrowers.[4] Among manufacturing, wholesaling, and retailing concerns the proportion of "steady" bank borrowers rose with size of concern. The turnover of businesses pledging their accounts receivable, equipment, or inventories as collateral security for bank

[3] In *Statistics of Income for 1937*, Part 2, it is reported that 192,028 corporations, or 40 percent of the total active corporations, filed returns showing net income in 1937, while 285,810 corporations, or 60 percent, filed returns showing no net income. The income corporations had total gross income of $109 billion or 77 percent of all corporate gross income, while the no-income corporations had $33 billion of gross income or 23 percent of the total.

[4] It would be valuable to know to what extent turnover in the borrowing clientele of commercial banks results from (1) business birth or discontinuance and (2) improvement or deterioration in the financial status of continuing enterprises. Both factors play a part, but the importance of each cannot be measured from existing data.

Table 4—NOTES PAYABLE IN PERCENT OF TOTAL ASSETS FOR NONFINANCIAL BUSINESS CORPORATIONS (INCOME AND DEFICIT), BY ASSET SIZE OF CORPORATION, 1937[a]
(*dollar figures in thousands*)

Asset Size of Corporation	*Income Corporations*	*Deficit Corporations*
Under $50	9.2%	15.8%
50–100	9.7	13.8
100–250	8.8	12.4
250–500	7.9	10.3
500–1,000	6.9	9.8
1,000–5,000	5.9	7.6
5,000 and over	2.0	3.1
TOTAL	3.3%	5.8%

[a] Based on U. S. Treasury Department, *Statistics of Income for 1937*, Part 2. Industrial divisions covered are manufacturing, wholesale and retail trade, construction, service, mining, and public utilities including railroads. Data as of December 31.

loans was more rapid than that of concerns borrowing in the traditional way on their unsecured notes. This may have been due in part to the attitude of commercial bankers that the former methods of financing constituted interim arrangements, and that within a limited period of time the borrower should improve his financial affairs to a point where funds could be advanced on some other basis or else he should get out of debt to the bank altogether.[5]

CHARACTERISTICS OF SHORT-TERM BANK LOANS TO BUSINESS

At the outbreak of World War II the majority of commercial bank loans to business took the form of straight promissory notes payable on demand or running for six months or less to a definite maturity date. The survey of commercial and industrial loans made by Federal Reserve member banks, which covered the month from April

[5] Raymond J. Saulnier and Neil H. Jacoby, *Accounts Receivable Financing* (National Bureau of Economic Research, Financial Research Program, 1943) p. 99.
Notwithstanding many exceptional cases, the *average* field warehouse receipt financing arrangement endured for about three years, and the typical accounts receivable financing arrangement lasted for under four years. See Neil H. Jacoby and Raymond J. Saulnier, *Financing Inventory on Field Warehouse Receipts* (National Bureau of Economic Research, Financial Research Program, 1944) p. 60, and *Accounts Receivable Financing*, p. 66.

16 to May 15, 1942, indicates that the 90-day note was the principal basis of short-term debt to banks. The average maturity of loans is, of course, a misleading measure of the average length of time any individual business is continuously in debt to a bank, because many bank loans are renewed successively, the borrower paying off part or all of an old note with the proceeds of a new one. Inasmuch as 41 percent of the total loan volume of the one month surveyed was accounted for by renewals of old loans, it would appear that the majority of loans were renewed in whole or in part at their average maturity of 90 days.

Apart from advances against demand or short-term notes, banks and commercial finance companies also entered into credit relationships with business which were short term in form but long term in actual duration, because of a "revolving credit" feature. The principal illustrations are loans secured by business accounts receivable, loans secured by warehouse receipts arising from the deposit of merchandise in a field warehouse on the premises of the borrowing business, and the financing of commercial and industrial equipment on instalment terms. These newer "short-term" business credit forms, which are described in Chapter 5, more directly recognize the actual duration of business credit requirements than does the traditional short-term commercial loan.

In both number and amount, the majority of short-term bank loans to business in 1939 were not collaterally secured by liens on business assets. They involved "open" credits, based on the financial worth and reputation of the borrowing enterprise or its principals and carrying only their promises to make repayment. Only 20 percent of all enterprises in five industrial divisions that borrowed from commercial banks in that year provided collateral security. Service industries most frequently provided liens on assets (in 43 percent of the cases), probably because many businesses such as garages and repair shops purchased equipment on conditional sales contracts or under chattel mortgages. Retail concerns furnished liens on assets in 26 percent of the cases, construction in 20 percent, manufacturing in 20 percent, and wholesale trade in 11 percent. Probably less than 20 percent of the $6,671 million of "commercial and industrial" loans held by operating insured commercial banks in the United States at the end of 1940 were collaterally secured.[6]

[6] Commercial and industrial loans on this date probably included about $2,162 million of term loans, which were not short-term credits, and about one-third of

While the newer forms of short-term business credit extended by banks involve collateral security, they constitute a minor part of total bank credit. The preponderance of business loans of commercial finance companies, it should be observed, are collaterally secured business loans.

Only a minor proportion of unsecured bank loans to business concerns in 1939 carried the endorsement of others than the borrower, thus providing the lending institutions with additional security. About 25 percent of the unsecured loans to manufacturing concerns were endorsed, 31 percent in wholesale trade, 26 percent in retail trade and in construction, and 7 percent in service industries. Among small corporations especially, principal stockholders or officers were often required to endorse the notes given by their companies. To the extent that this occurred, the limited liability otherwise enjoyed by owners of corporations partly disappeared.

INTEREST CHARGED ON SHORT-TERM BANK LOANS

The effective annual interest rates — including any special service fees — charged for business credits around 1940 were determined by the size of the loan, the amount of risk of non-repayment attached to the loan, and the character of the financing plan. From the point of view of the lending institution, the major element in the charge was not "pure" interest, or the return on "riskless" loan assets with short maturities, for which the yield (e.g., on high-grade commercial paper) was under 1 percent at that time; it was the expense of loan administration and the premium for risk of nonrepayment. In making a loan of any amount, a bank incurs certain "fixed" costs in investigating the applicant and appraising his financial worth and prospects. When these expenses are spread over a small loan, the charge per dollar is necessarily higher than when they are spread over a large loan. Moreover, the risks of lending to small ventures are typically greater, because the average profit rate is lower and less stable than for large businesses.

According to the Federal Reserve member bank survey made in 1942, interest rates charged on business loans averaged 3.4 percent.

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which were collaterally secured. See Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942) pp. 30, 49, and 50.

But the rate ranged from 5.5 percent on loans to the smallest class of borrowing businesses to 1.8 percent on loans made to the largest class of concerns. Industrial variations in loan rates, which roughly measure differences in the risk of investment in various fields, were also quite marked. Finally, collateral loans carried substantially higher charges than did unsecured loans, because the charge had to cover the additional expense of appraising and handling the collateral security.

Charges by commercial banks on accounts receivable loans ran between 6 and 9 percent per annum during 1941. Commercial finance companies, which generally assumed somewhat larger credit risks and incurred greater administrative expenses in lending against accounts receivable, charged rates running between 9 and 20 percent. Loans secured by field warehouse receipts, which were made by both banks and commercial finance companies, involved credit costs ranging from 4 to 10 percent. In financing business equipment on instalment terms, lending institutions appear to have charged between 5 and 7 percent.

NATIONAL CHARACTER OF SHORT-TERM CREDIT MARKET

The degree of uniformity in the characteristics of short-term business credit in different parts of the United States in 1940 reflected a credit market more national in character than is often assumed. At the outbreak of World War II, a business concern of given size and industry would probably have used credit of about the same maturity, employed it for about the same purposes, paid about the same charge for it, and provided the same type of collateral security, whether the concern was located in Boston, Chicago, or Seattle. The policies of business managements in the use of short-term credit did not vary significantly over the nation.[7] Those regional differences in loan characteristics that did exist were attributable in large part to differences in the size and industrial affiliations of businesses in different regions. For example, geographical variations in the use of the newer collateralized business loans clearly

[7] It has been found that in 1939 "The pattern of credit use . . . appears to have little connection . . . with . . . geographic location and population size of location centre." See Carl Kaysen, *op. cit.*, p. 39.

reflected differences in the economic resources of the several regions. Lending on field warehouse receipts was used with more than average frequency in the Pacific area, where it is particularly adapted to the canning and lumbering industries. Accounts receivable financing flourished in the Atlantic states, where the textile industries are important. For even the cost of bank credit, the evidence indicates that a considerable fraction of the wide spread of *average* interest rates charged business concerns in different regions can be resolved into regional variations in the average size or industrial affiliation of borrowers.[8] Regional differences in interest rates — particularly those charged by very small banks to very small businesses — also reflect other factors, such as differences among regions in the costs of money to the banks.

SOURCES OF MEDIUM-TERM AND LONG-TERM CREDIT TO BUSINESS

Medium-term and long-term business credit running more than one year to maturity has taken two broad forms in the United States: *direct* loans obtained by personal negotiation with lenders and including such types as term loans, private placements of bonds, notes or debentures, and mortgage loans; *open market* loans obtained through public offerings of debt securities, in which the services of investment underwriters and dealers are ordinarily utilized as intermediaries between borrowing concerns and their creditors — the ultimate security holders. In 1940 commercial banks engaged in both direct lending on medium term and the purchase in the open market of medium- and long-term corporate securities for investment account. As grantors of medium- and long-term business credit, banks competed with a set of lending agencies different from those they faced in the short-term credit market, and, to a considerable extent, they served larger businesses.

In obtaining medium- and long-term credit, the business community made use of direct loans with much greater frequency than open market loans. Of the 650 thousand concerns estimated to have outstanding medium- and long-term debt in 1940, only about 3.2 thousand, or ½ of 1 percent, had publicly distributed debt secu-

[8] See *Federal Reserve Bulletin*, November 1942, p. 1089.

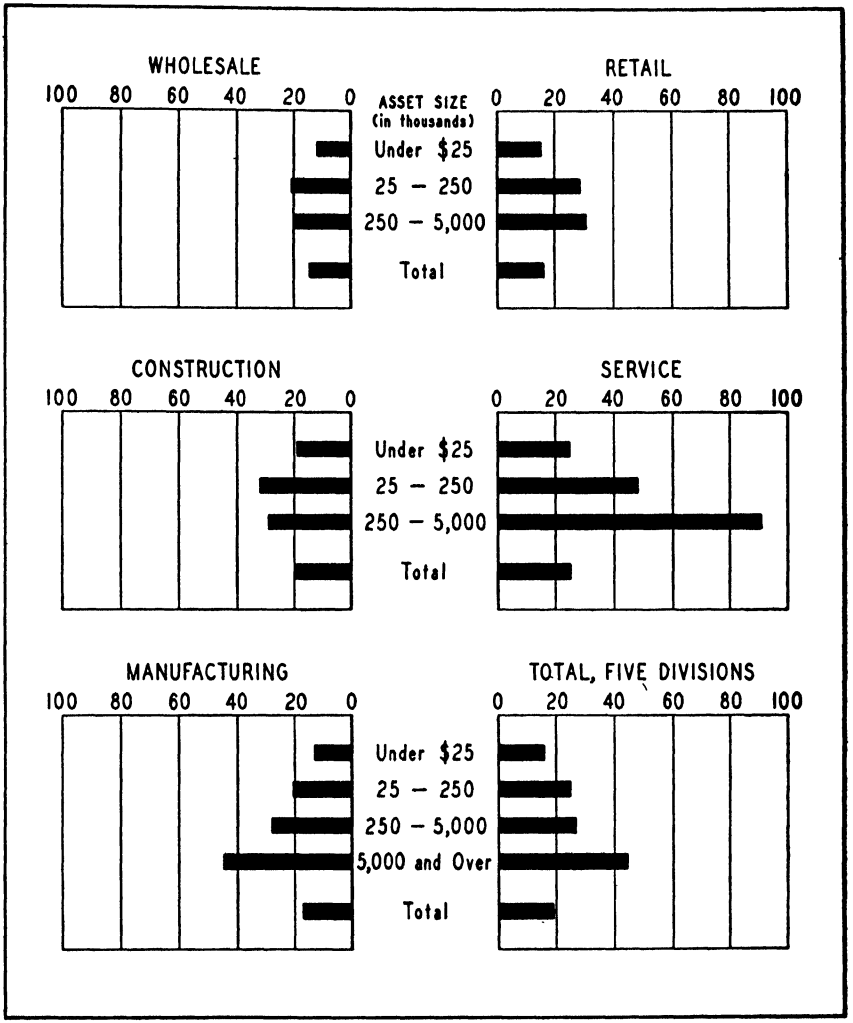
rities outstanding. The remaining 99.5 percent had negotiated their loans directly with a financial institution, an affiliated business concern, or an individual. Only a minor fraction of the number of such direct loans could be traced to a particular type of creditor. It is known that up to the end of 1940 the government loan agencies, comprising the Reconstruction Finance Corporation and the Federal Reserve banks, had granted term loans to about 11 thousand enterprises. In addition, commercial banks and the largest life insurance companies had lent directly to about 3.8 thousand businesses. Apparently hundreds of thousands of small and medium-sized concerns had obtained medium- and long-term credit from individual capitalists, local insurance companies, savings banks, savings and loan associations, investment companies, trust funds, nonprofit organizations, or other business enterprises.

The amount of the gross long-term debt of all corporations at the end of 1940 was about $52 billion. Approximately $8.3 billion represented debts owed to other corporations, indicating the great extent to which businesses were financing each other through long-term loans. As for the balance of these obligations, life insurance companies were the most important holders, their portfolios of long-term debt securities amounting to approximately $10 billion. Commercial banks ranked next, with holdings of about $5.1 billion made up of $2.2 billion of term loans, $2.4 billion of marketable securities of business corporations, and about $500 million of mortgage loans to industry. Mutual savings banks held about $1 billion of corporate bonds and notes, and the Reconstruction Finance Corporation had outstanding loans to nonfinancial businesses amounting to $599 million. After deduction of these known repositories of long-term corporate debt from the total, $27 billion remained to be accounted for. Presumably, this balance represented the outstanding long-term business credits extended by other sources, as mentioned above.

BUSINESSES USING MEDIUM-TERM AND LONG-TERM CREDIT

The 650 thousand American business enterprises that owed medium- and long-term debt at the beginning of World War II may be compared with the more than 2.7 million concerns that were in-

Chart 8 — FREQUENCY OF LONG-TERM DEBT AMONG NONFINANCIAL BUSINESS CONCERNS OF DIFFERENT ASSET SIZES, 1939
(in percent of all concerns in each size class)



Among the industrial divisions considered here, long-term debt was found most frequently in the service industries and least in wholesaling. In all divisions except wholesaling and construction, the frequency of use of long-term debt rose with size of business.

debted on short-term account. Among large corporations, only 44 percent had long-term debt in 1937. Such debt was least frequent among the extractive industries (26 percent of the concerns), higher in manufacturing (41 percent), still higher in trade (52 percent), and well-nigh universal among public utility corporations, 99 percent of which had such obligations. These figures generally bear out the theory that long-term debt, which imposes an annual fixed charge on earnings, is incurred most often by concerns having the greatest stability in earning power.

Among corporations of different sizes in the five major industrial divisions studied, less than one-fifth of those with total assets under $25 thousand showed long-term debt on their balance sheets in 1939 (Chart 8). But as asset-size of business increased the percentage of businesses having such debt rose, and 80 percent of the industrial giants with assets of $500 million or more were so indebted.[9] The marked rise in the use of long-term debt with size of enterprise probably reflected the increasing availability of such credit as the average profit rate rose and as annual earning power became more stable. It may also have resulted from a financial policy of business management not to commit the earnings of future years until there was a high probability that the commitment could be met without difficulty.

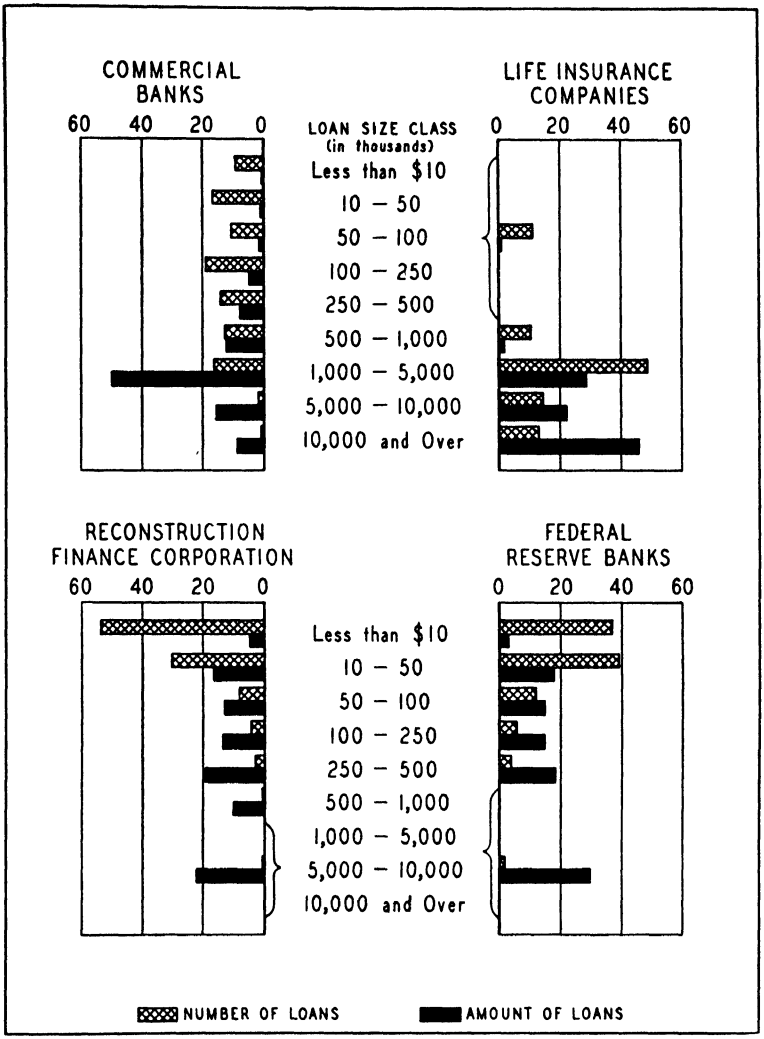
The businesses to which banks and life insurance companies granted the bulk of their medium- and long-term credit differed considerably from those served by the Reconstruction Finance Corporation and the Federal Reserve banks. As shown by Chart 9, these public lending agencies on the whole did not compete extensively with the private institutions in regard to the size of medium-term business loans made; and this absence of extensive competition with respect to size of loan reflects a similar condition with respect to size of business served.[10]

For all types of lending institutions, manufacturing businesses were the most important class of recipients of term loans (Chart

[9] The low frequency of long-term debt among small manufacturing corporations was confirmed by C. L. Merwin, who found that only 26 percent of a sample of 1,300 such concerns with total assets under $250 thousand had outstanding bonds or mortgages in 1936. Temporary National Economic Committee, *Financial Characteristics of Small Manufacturing Corporations* (Monog. 15, Washington, 1941) pp. 110–12.

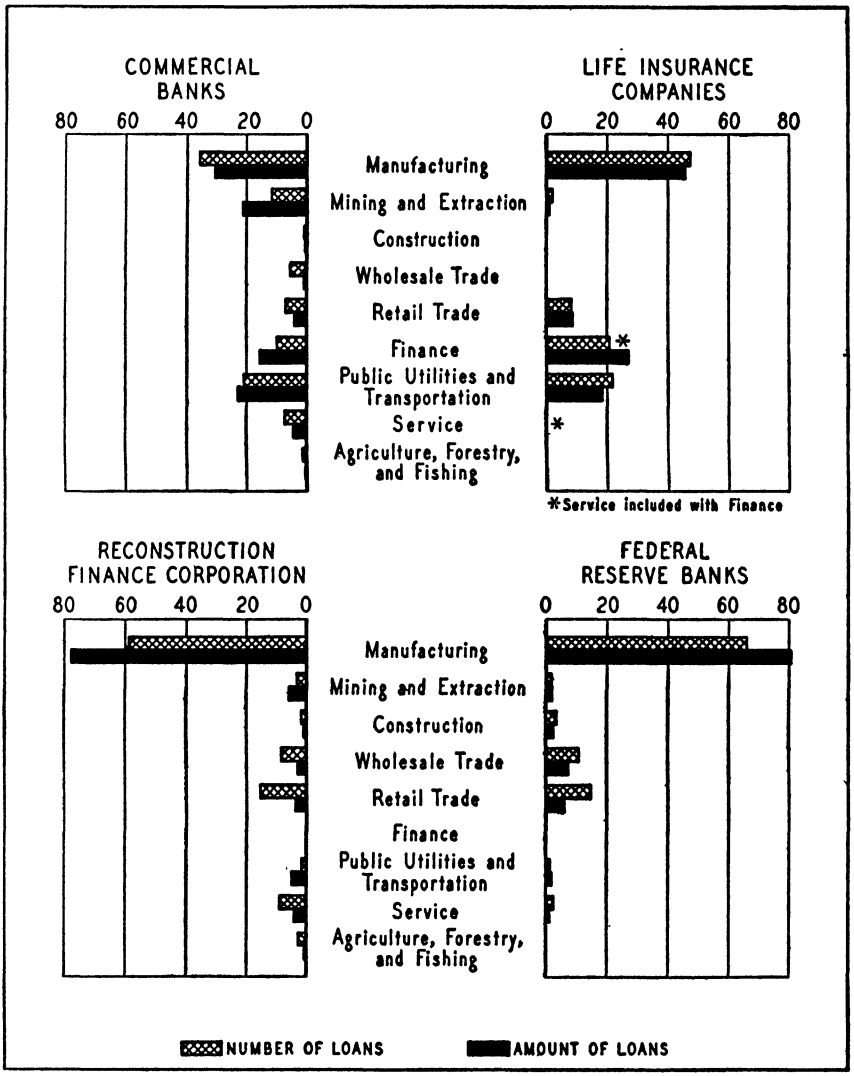
[10] See *Term Lending to Business, op. cit.*, p. 36.

Chart 9 — PERCENTAGE DISTRIBUTION BY SIZE OF LOAN OF NUMBER AND ORIGINAL AMOUNT OF MEDIUM-TERM LOANS HELD BY LENDING INSTITUTIONS AROUND 1940



The largest number of loans made by public loan agencies were in amounts less than $500,000; loans of life insurance companies were primarily in excess of this amount. Commercial bank loans were more diversified.

Chart 10 — PERCENTAGE DISTRIBUTION BY MAJOR INDUSTRIAL DIVISIONS OF NUMBER AND ORIGINAL AMOUNT OF MEDIUM-TERM LOANS HELD BY LENDING INSTITUTIONS AROUND 1940



For all lending institutions, manufacturing accounted for more borrowers and more credit than did any other industrial group. The industrial diversification of the commercial bank market was greater than that of any other type of institution.

Table 5—ESTIMATED PERCENTAGE DISTRIBUTION OF ORIGINAL AMOUNTS OF BANK-ELIGIBLE CORPORATE BONDS OUTSTANDING, 1939, AND OF MEDIUM-TERM LOANS HELD BY COMMERCIAL BANKS, 1941, BY MAJOR INDUSTRIAL DIVISIONS[a]

Industrial Division	*Bank-Eligible Corporate Bonds Outstanding January 1, 1939*	*Term Loans Held July 1, 1941*
Manufacturing	11.6%	30.6%
Mining and extraction[b]	1.0	21.4
Construction	[c]	.2
Wholesale trade	1.4	.8
Retail trade		4.0
Railroads	33.3	22.7
Other public utilities	44.0	
Service	.4	4.5
Finance	8.3[d]	15.8
TOTAL	100.0%	100.0%

[a] For sources see Appendix, p. 230.
[b] Includes agriculture, forestry, and fishing.
[c] Less than .05 percent.
[d] Estimated on the basis of data from National Bureau of Economic Research, Financial Research Program, *Moody's Manual of Investments*, and other sources.

10); these enterprises together with finance companies took more than half of the term loans of the banks and insurance companies. Railroad and other public utility corporations negotiated only 23 percent of the amount of term loans of commercial banks, but they issued more than 75 percent of bank-eligible corporate bonds outstanding (Table 5).[11]

[11] While there is little direct information regarding the character of corporations whose issues were held by banks for investment account, such data are available for all bond issues *outstanding* on January 1, 1939 which were eligible for purchase by commercial banks under the regulations of the federal supervisory agencies. "Eligible" bonds are those placed within the first four rating groups by a recognized rating service. (See *Annual Report of the Federal Deposit Insurance Corporation*, 1938, p. 64.) Bonds rated below these four groups, but viewed by examiners as of investment quality, and unrated bonds of equivalent grade are appraised for examination purposes in the same manner as are those in the four highest rating groups; these data, however, could not be included in the tabulations presented here. A fair assumption is that the bulk of the corporate bond *holdings* of banks consisted of the eligible high-rated securities.

Of the $29 billion of railroad, industrial, and public utility bonds outstanding on January 1, 1939, 57 percent met the requirements of the federal supervisory agencies for purchase by commercial banks. (Data from records of Corporate Bond Project, National Bureau of Economic Research, Financial Research Program.)

CHARACTERISTICS OF MEDIUM-TERM AND LONG-TERM LOANS TO BUSINESS

Significant differences existed before World War II between the medium- and long-term loans of banks and of other credit institutions. There were also differences between the direct and the open market business loans of commercial banks with respect to the term of the debt to its maturity, the type of security taken by the lender to assure repayment, the use of the funds by the borrower, the provisions for repayment, and the interest charged the borrower.

Maturity

The original term to maturity of corporate bonds eligible for purchase by commercial banks around 1940 was considerably longer than that of term loans made directly to business. Practically all the amounts of corporate bonds were due after five years, whereas approximately half of all term loan credit matured within five years (Table 6). The majority of direct business loans of the RFC also matured within five or ten years, while the maximum term of

Table 6—ESTIMATED PERCENTAGE DISTRIBUTION OF ORIGINAL AMOUNTS OF BANK-ELIGIBLE CORPORATE BONDS OUTSTANDING, 1939, AND OF MEDIUM-TERM LOANS HELD BY COMMERCIAL BANKS, 1941, BY ORIGINAL TERM TO MATURITY[a]

Original Term to Maturity[b]	*Bank-Eligible Corporate Bonds Outstanding January 1, 1939*	*Term Loans Held July 1, 1941*
1 year	[c]	1.1%
1–3	.1%	13.0
3–5	.3	35.4
5–10	5.9	48.7
10–15	13.6	.6
15–20	6.2	...
20–30	36.3	...
30–50	29.7	...
Over 50	7.9	...
No information	...	1.2
TOTAL	100.0%	100.0%

[a] For sources see Appendix, p. 230.
[b] Each interval is exclusive of lower limit and inclusive of upper.
[c] Less than .05 percent.

Table 7—ESTIMATED PERCENTAGE DISTRIBUTION OF ORIGINAL AMOUNTS OF BANK-ELIGIBLE CORPORATE BONDS OUTSTANDING, 1939, AND OF MEDIUM-TERM LOANS HELD BY COMMERCIAL BANKS, 1941, BY TYPE OF COLLATERAL SECURITY[a]

Type of Security	*Bank-Eligible Corporate Bonds Outstanding January 1, 1939*	*Term Loans Held July 1, 1941*
All Bonds or Loans		
Unsecured	17.6%	66.5%
Secured	82.4	33.3
No information	...	.2
TOTAL	100.0	100.0
Secured Bonds or Loans		
Real estate mortgages only	54.4	10.5
Stocks and bonds only	3.1	37.6
Other types of assets only	...	30.1
Combinations of assets	42.5	21.8
TOTAL	100.0%	100.0%

[a] For sources see Appendix, p. 230.

loans by the Federal Reserve banks was limited by law to five years. Lending institutions sought to compensate for the lack of marketability of the direct loans by requiring, in most cases, instalment repayments under a prearranged schedule and by imposing shorter final maturities.

Collateral

Only about one-third of the amount of bank term loans to business around 1940 was collaterally secured by liens on assets, while more than four-fifths of the open market issues outstanding were so secured (Table 7). As would be expected, the typical secured loan was smaller and carried a somewhat greater risk of nonrepayment than did the typical unsecured loan, thus indicating a tendency for lenders to substitute collateral security for financial strength or early maturity as a risk-limiting device.[12] With respect to those credits that were secured, real estate only or a combination of assets

[12] It is also significant that among medium-term issues a far higher proportion of low-rated than of eligible corporate bonds was secured, and that among all issues the frequency with which security was taken increased measurably with term to maturity.

was used more frequently as security under corporate bond indentures, whereas single types of assets other than real estate were more frequently pledged to secure term loans. Like bank term loans, one-third of the amount of medium-term securities privately purchased by life insurance companies was collaterally secured, reflecting their prime quality as credit risks. In marked contrast, 83 percent of the business credit granted by the Federal Reserve banks and virtually all that of the RFC was secured. The public agencies, dealing with borrowers unable to obtain accommodation through private channels, were compelled to take every precaution to assure repayment. A feature of the RFC loans was that combinations of assets were placed under lien in many instances.

Use of Funds

The majority of bank-eligible corporate issues around 1940 were for both retirement and new money purposes, whereas bank term loans were generally used exclusively for either one or the other purpose (Table 8). Thus term loans served simpler functions in the borrowing businesses, because they were of shorter term to maturity and of smaller average amount. RFC loans were restricted by statute to "maintaining or promoting the economic stability of the country or encouraging the employment of labor," and the Corporation announced that it would *not* lend money primarily to enable a borrower to repay existing debts. Federal Reserve bank loans were limited by law to the provision of "working capital," which precluded use of the proceeds for refunding, plant expansion, or improvement.

Repayment Provisions

In regard to method of repayment, no less than 88 percent of the amount of bank-eligible corporate bonds was repayable in one lump sum at maturity, whereas about 85 percent of all term loan debt was repayable in instalments, for the most part equal in amount but in many instances with a final "balloon" note larger than its predecessors. Serial bonds were relatively unimportant in open market corporation financing, except in the financing of railroad equipment. But approximately 17.5 percent of corporate bond issues required annual purchases of outstanding debt through sinking funds, thus reducing debt in the hands of the public periodically in

Table 8—ESTIMATED PERCENTAGE DISTRIBUTION OF ORIGINAL AMOUNTS OF BANK-ELIGIBLE CORPORATE BONDS OUTSTANDING, 1939, AND OF MEDIUM-TERM LOANS HELD BY COMMERCIAL BANKS, 1941, BY USE OF FUNDS[a]

Use of Funds	*Bank-Eligible Corporate Bonds Outstanding January 1, 1939*	*Term Loans Held July 1, 1941*
All Bonds or Loans		
New money only	14.8%	31.6%
Retirement only	32.6	54.1
Combination of purposes	41.8	12.3
No information	10.8	2.0
TOTAL	100.0	100.0
New Money Bonds or Loans		
For plant or equipment only	84.2	32.9
For working capital only	7.8	49.3
For both or other purposes	8.0	17.8
TOTAL	100.0	100.0
Retirement Bonds or Loans		
To retire bonds only	95.8	47.0
To retire other debt only or combinations of debt	...	43.4
To retire preferred stock only	4.2	3.2
Other combinations	...	6.4
TOTAL	100.0%	100.0%

[a] For sources see Appendix, p. 230.

much the same manner as do serial maturities. In the case of term loans, the amount of gross and net income is the primary consideration in forming term loan repayment schedules, but the amount to be repaid serially is not usually made conditional on the realized gross or net income of the borrower, because this practice would thrust a considerable amount of business risk upon the bank.[18] Medium-term securities privately acquired by life insurance companies tended to resemble open market bonds in their repayment provisions, about three-quarters of their amount being repayable in a lump sum and one-quarter carrying serial maturities. On the other hand, almost all the RFC and Federal Reserve bank loans to busi-

[18] The payment of interest upon income bonds is, of course, made conditional upon the existence of net income.

ness were repayable in instalments, which were generally due monthly or quarterly rather than annually. These requirements undoubtedly reflected the close control that the lender to financially-straitened businesses finds it necessary to exercise in order to protect his position.

Interest Rates

Nearly all term loan credit and long-term credit acquired under bank-eligible corporate issues around 1940 cost the borrowers between 2 and 5 percent (Table 9). However, while 38 percent of term loans were made at rates below 3 percent, all eligible corporate bonds maturing in more than 15 years were issued at rates of 3 percent and over. Term loans, because of their smaller average size, might be expected to carry a rate above that on corporate issues; on the other hand, corporate issues, having an average term to maturity longer than that for direct loans, might be expected to carry the higher rate. These two factors tended to, but did not completely, offset one another, which accounts for the differential in average interest rates.

The average charge by banks for medium-term and long-term credit extended to business enterprises, it is significant to note, was about equal to their average charge for short-term credit, the higher quality and larger size of the long-term loans offsetting the shorter life of the short-term loans. Likewise, among public lending agencies rates tended to be about the same, regardless of final maturity; for both RFC and Federal Reserve bank loans to business, rates varied from 3½ to 6 percent, depending mainly upon size, industrial character, and credit standing of the borrower.

COMPETITIVE FORCES WITHIN THE MEDIUM-TERM AND LONG-TERM BUSINESS CREDIT MARKET

In direct lending on medium and long term during the years prior to World War II, life insurance companies, commercial banks, and government loan agencies — the three principal types of institutional suppliers of these types of credit to business — served different size groups of business. Life insurance companies provided both medium-term and long-term loans primarily to large concerns; banks provided credits of intermediate length to size groups of bor-

Table 9—ESTIMATED PERCENTAGE DISTRIBUTION OF MEDIUM-TERM LOANS MADE BY COMMERCIAL BANKS, MARCH 16–31, 1939, MEDIUM-TERM ISSUES PRIVATELY PURCHASED BY LIFE INSURANCE COMPANIES, 1938, AND ORIGINAL AMOUNTS OF BANK-ELIGIBLE CORPORATE BONDS ISSUED IN 1938, BY EFFECTIVE RATE OF INTEREST

Effective Rate of Interest	*Term Loans Made by Commercial Banks March 16–31, 1939*[a]	*Issues Maturing in Less Than 15 Years Privately Purchased by Insurance Companies During 1938*[b]	*Bank-Eligible Corporate Bonds Maturing in Less Than 15 Years Issued in 1938*[c]	*Bank-Eligible Corporate Bonds Maturing in More Than 15 Years Issued in 1938*[c]
1–2%	1.0%	...	.1%	...
2–3	37.1	31.3%	19.3	...
3–4	45.5	55.6	57.2	85.4%
4–5	15.2	13.1	20.6	14.5
5–6	.5	...	2.7	.1
6–7	.6	...	.1	...
7 and over	.1	...	...	...
TOTAL	100.0%	100.0%	100.0%	100.0%

[a] From Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942) p. 103.

[b] *Ibid.*, p. 106.

[c] From compilations of the National Bureau of Economic Research, Financial Research Program, Corporate Bond Project, supplemented by material from Baltimore and Ohio Railroad, *Analysis of Sales of Railroad Securities Under Authorization of Interstate Commerce Commission from May 1920 to December 31, 1938* (Baltimore, 1939). Only publicly placed obligations are included. Data are based on single-maturity, fixed-income bonds plus equipment trust certificates and other serial bonds. "Bank-eligible" bonds are those placed within the first four rating groups by a recognized rating service.

rowers ranging from very small to very large, but the bulk of this credit went to concerns of medium size; the government loan agencies served medium-sized and small businesses.

In medium- and long-term lending, the intensity of inter-agency competition was great in the making of large loans to the larger businesses possessing impeccable credit ratings. Banks and insurance companies competed actively for such business, which drove down the loan rate. In the making of medium-term loans to small businesses, inter-agency competition was less intensive, because the private lending institutions often considered the risks and costs of lending to this clientele too high relative to the rates which they could (or would) charge. Medium-term credit, in practice, was available to many small businesses only at, or with the participation of, the Reconstruction Finance Corporation or the Federal Reserve banks. To the extent that public regulation of banks and life insurance companies discouraged the assumption of credit risks, such regulation served, of course, to intensify competition for the large, prime loans and to reduce it for small loans.

A number of factors account for the substantial fraction of long-term credit to business procured directly from a lending institution in 1940 rather than indirectly through a public offering of bonds or notes — even by large concerns able to use either method. In the first place the costs of making a public offering were numerous and onerous. They included expenses imposed upon issuers by the Securities Act of 1933, underwriters' commissions, costs of advertising, the printing of registration statements and prospectuses, the engraving of certificates or bonds, transfer taxes, and costs of listing the new securities on exchanges and of maintaining transfer facilities. But the greater speed and flexibility of direct financing versus open market financing may have weighed as heavily as cost considerations. Compared with public issues, direct loans had the advantage of rapid negotiation and expeditious modification to meet changed circumstances. Direct loans also offered the advantages of requiring no special public disclosures of corporate affairs, and of freeing directors of the borrowing corporation from the civil liabilities they would carry if a public offering were made.

But the public offerings possessed special advantages of other kinds. They could broadly establish the credit of the borrowing concern, enabling it to obtain lower interest rates in future financing. Wide distribution of the debt of the borrowing business could

enable the concern occasionally to repurchase and retire debt on advantageous terms. The choice between open market and direct borrowing appeared to be based upon a weighing of alternative costs and advantages in the light of the borrowing business' circumstances.

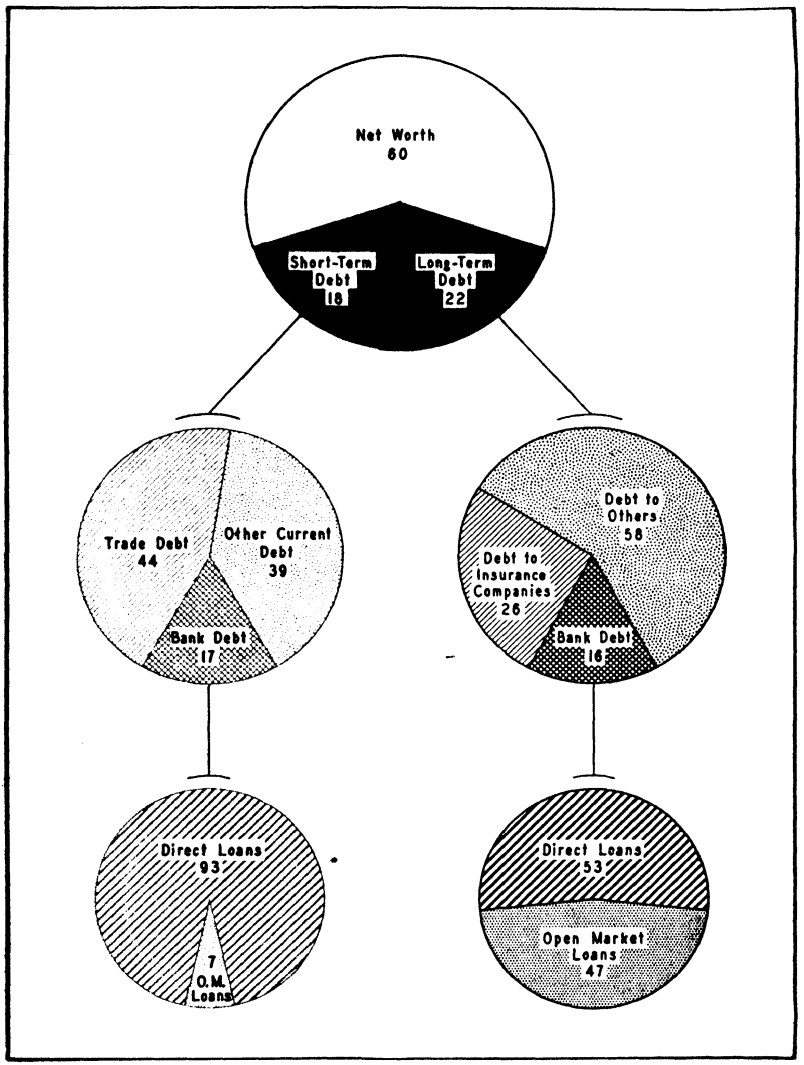
STAKE OF COMMERCIAL BANKS IN FINANCING OPERATIONS OF NONFINANCIAL BUSINESS

A surprisingly small percentage of the total earning assets of the commercial banking system at the end of 1940 represented outstanding credit to nonfinancial business enterprises. The amount of such credit is estimated at about $10.3 billion, or less than 25 percent of the total earning assets of $42.6 billion held at that time by all operating insured banks. Loans to nonfinancial business were only half as important as federal, state, and local government securities, and about equal in importance to the aggregate amount of credits extended to security dealers, agriculture, consumers, and nonprofit institutions. Thus, well before the necessities of war had inflated federal borrowings from the banks, government as a banking customer was twice as important as business, excluding agriculture and security dealers. Wartime federal financing only accentuated this condition.[14]

About $7.7 billion or three-fourths of all bank credit to nonfinancial business took the technical form of "loans and discounts," and the balance of $2.6 billion was investment in "securities." This distinction does not break down nonfinancial business credit into short-term and long-term advances, nor into credit extended through the open market and that granted directly. The data in Chart 11 are classified along these lines and reveal the astonishing fact that nearly half of all bank credit to nonfinancial business was long-term in character, maturing more than a year after being contracted. This measures the extent to which banks had departed by 1940 from the short-term self-liquidating business advance sanc-

[14] The large role which direct consumer financing had come to play in banking operations by the end of 1940 was also of great significance. Consumer credit, comprising instalment loans and home mortgage loans, amounted to about $4.4 billion, or nearly one-half of outstanding business credit. Consumer instalment loans as of the end of 1940 are estimated by the National Bureau of Economic Research, Financial Research Program, as approximately $1.5 billion. The *Annual Report of the Federal Deposit Insurance Corporation*, 1940, p. 145, records loans secured by residential property amounting to $2.9 billion.

Chart 11 — COMPOSITION OF THE DEBT OF NONFINANCIAL BUSINESS CONCERNS AROUND 1940
(*in percent*)



Of the total short-term debt owed by nonfinancial business, bank loans comprised only about one in every six dollars, and nearly all such bank credit was acquired directly. Of the long-term debt, one dollar in six was also owed to banks, but nearly half consisted of securities purchased in the open market.

tioned by the classical theory of banking. Of equal interest was the great difference between the relative importance of open market and direct loans. Nearly 93 percent of short-term bank credit to nonfinancial business was extended directly to the borrower, while only 53 percent of long-term credit was so transmitted.[15] The minor importance in the United States of open market dealings in the short-term debts of nonfinancial business concerns contrasts strongly with market conditions for trade bills and acceptances in British finance. Likewise, the extent to which American banks purchased directly the long-term obligations of business enterprises is notable in comparison with British practices.

From the point of view of the gross revenue it produced, credit extended to nonfinancial business was a more important aspect of commercial banking than the relation of such loans to total "earning assets" suggests. Available data do not reveal the amount of banks' gross earnings from loans to nonfinancial business. They show only gross earnings from loans of all kinds and from investments in securities of all kinds, thus mingling business concerns with other borrowers. From these data it is known that for banks, on the average, the gross revenue collected from each dollar of loans in 1940 was about twice that collected from each dollar of investments, the figures being respectively 4.18 percent and 2.07 percent.[16] Since a preponderance of credit to nonfinancial business takes

[15] It should be noted that Chart 11 pertains to *all* business enterprises, while certain other charts — for example Charts 3 and 4 presenting data by industrial divisions — pertain only to *corporate* business enterprises, since data for all business enterprises are not available by industries. Inasmuch as corporate business comprises about 88 percent of all business assets, no great distortion is produced when the corporate sphere alone is examined.

[16] This conclusion may be drawn from data in Table 119, p. 144, and Table 139, p. 190, of *Annual Report of the Federal Deposit Insurance Corporation*, 1940 (dollar figures in thousands):

	Loans and Discounts	*Investments in Securities*	*Totals*
Held December 31, 1940			
Amount	$18,397,775	$24,163,328	$42,561,103
Percent	43.2	56.8	100.0
Gross earnings during 1940			
Amount	$768,770	$499,650	$1,268,420
Percent	60.6	39.4	100.0
Earnings per dollar, 1940	4.18%	2.07%	2.98%

Because commitment fees and standby commissions on business loans apparently are not included in "interest and discount on loans," the preceding figures understate to a minor degree the true difference between the gross revenue from loans and that from investments.

the form of loans and a preponderance of other credit takes the form of securities, the former as a whole produced a higher rate of gross income per dollar than did the latter as a whole. When allowance is made for the somewhat higher effective yield of corporate bonds than of government security holdings, it may be concluded that roughly one-third of the gross earnings of banks from all credit operations accrued from business credit.[17] Nothing can be said with certainty concerning the net profitability to banks of any type of lending operation in 1940, because banking costs are not commonly broken down between loans and investments of different kinds.

The extent of the financing of nonfinancial business enterprises in 1940 was not, of course, the same for all commercial banks. The stakes of individual banks differed according to the size of the banks, the size of the centers in which they were located, the economic character of the territories, and banks' operating policies. Broadly speaking, business loans formed relatively high percentages of the total assets of medium-sized banks with total deposits between $500 thousand and $10 million. In many instances these banks were located in cities where diversified industrial activity made the demand for business credit most active. Agricultural credits comprised a large percentage of the total loan portfolios of small banks, since these banks usually served agricultural areas or were located in small population centers where local demands for business credit were not extensive. Mortgage loans secured by residential and other property formed a substantial proportion of the loan portfolios of banks with assets of over $10 million, except those in central money markets. Nevertheless, divergencies among banks in the importance of business financing activities were not strikingly large prior to World War II.

[17] In making this estimate, gross earnings from commissions, fees, collection, exchange, and service charges, and other current operating earnings have been *excluded*, although some part of these earnings of banks is certainly attributable to their loan and investment activities. If income from trust, collection, exchange, and other services is included, total gross current operating earnings of all insured operating commercial banks during 1940 amounted to $1,631,074,000. (See *Annual Report of the Federal Deposit Insurance Corporation*, 1940, Table 139, p. 190.) Of this total, business credit may be roughly estimated to have produced $374,809,000, or 23 percent.

Part II

BUSINESS CREDIT MARKET CHANGES FROM 1900 TO 1940

Chapter 3

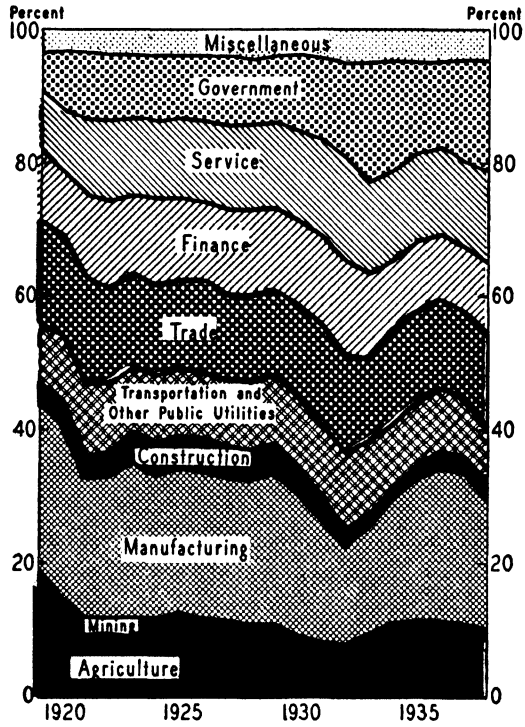
CHANGES IN COMMERCIAL BANK RELATIONS WITH BUSINESS: 1900–1940

CHANGES SINCE 1900 IN the relations between commercial banks and nonfinancial business enterprises have resulted from numerous economic tendencies. One of the most important is the shift in the structure or composition of the economy, reflecting the fact that all segments of the economy have not grown at the same rate. An increased relative importance of industries showing a less than average dependence on bank credit tends to weaken business demand for such credit while, conversely, the growth of industries with higher than average dependence on bank credit strengthens the demand. From the point of view of this study, the significant structural changes are those relating to the industrial and size composition of the business population; as indicated in Chapter 1, these changes directly affect the demand by business enterprises for credit.

CHANGING RELATIVE IMPORTANCE OF INDUSTRIES AND BUSINESS CREDIT DEMANDS

Changes in the industrial composition of the American economy appear to have been such as to prevent bank credit to nonfinancial business from sharing fully in the growth of the whole economy. This is certainly true of developments after World War I. A breakdown of national income by major industrial divisions for the period 1919–38 reveals marked declines in the relative importance in the economy as a whole of agriculture and manufacturing as sources of income; somewhat less significant declines in mining and construction; and definite increases in the service industries and government (Chart 12). Data covering the distribution of gross national product by industrial origin also reveal that the relative importance of manufacturing and agriculture decreased after

Chart 12 — National Income Derived from Major Industrial Divisions, 1919–38



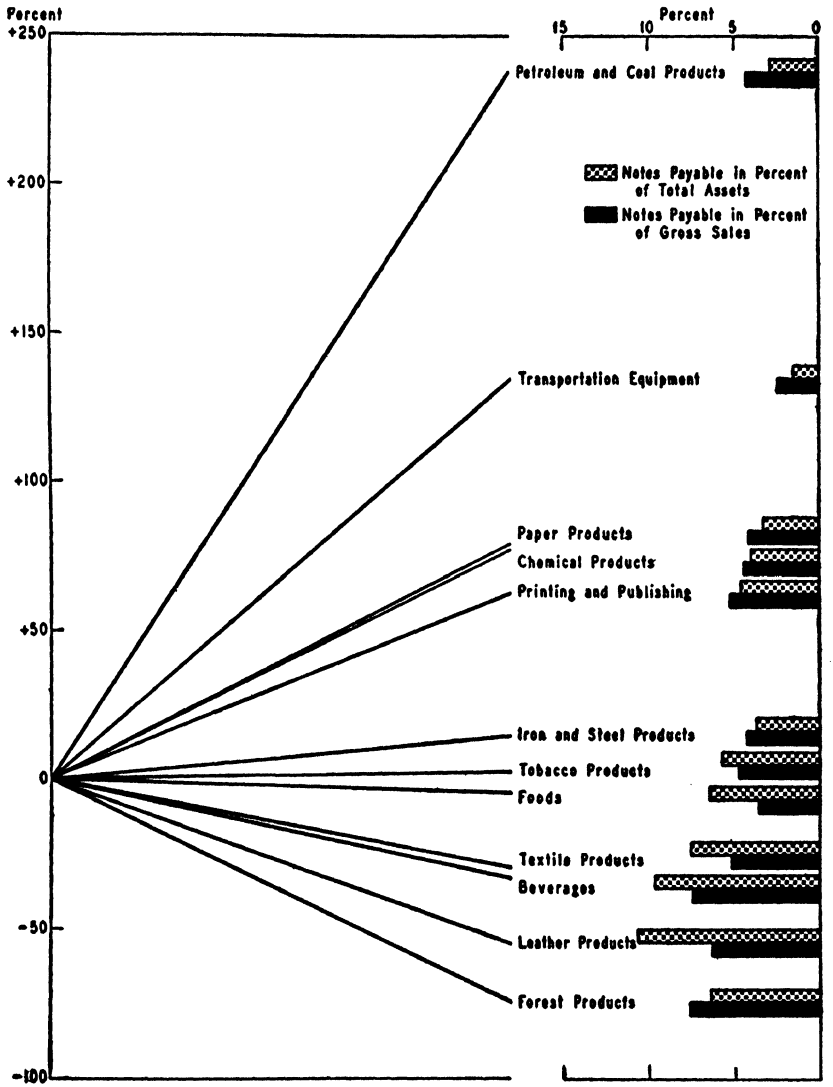
After 1919, agriculture, manufacturing, mining, and construction declined as contributors to national income; service industries and government grew in importance; other industries changed but little.

1919; lesser degrees of decline occurred in mining, construction, and trade; transportation and other public utilities shared a slight increase; and the service and government divisions rose very markedly in relative importance.

The significance of these broad tendencies to the over-all demand for business credit is clear. The sectors — manufacturing and agriculture — that suffered the greatest relative decline accounted for substantial parts of the total demand for credit; those that enjoyed the greatest relative increase were government, which does not produce any direct demand for business financing services of financial agencies, and the service trades, which despite their growth are a minor element in the business credit market. Industrial divisions like transportation and other public utilities, which held their own over the period, were significant borrowers only in the open market and were interested primarily in long-term rather than short-term funds.

Since most of the data bearing on changes in industrial composition go back only to 1919, it is difficult to be certain whether the shifts were movements that set in after World War I or were con-

Chart 13 — CHANGES IN THE RELATIVE CONTRIBUTION OF SELECTED MANUFACTURING INDUSTRIES TO TOTAL MANUFACTURING OUTPUT, 1899–1937, COMPARED WITH DEPENDENCE ON BANK CREDIT, 1937



In general, the manufacturing industries that made the greatest strides between 1899 and 1937 in their relative contribution to total manufacturing output were those that in 1937 were the least dependent on bank credit for the financing of assets.

tinuations of changes that were operating before the war. There is some evidence, however, which leads to the following conclusions: first, that the shifts in the relative importance of agriculture, government and, in all probability, service industries began prior to World War I, and, second, that the declining importance of manufacturing was mainly a postwar phenomenon reflecting the readjustment of production from the high level of output elicited during the war by the needs of the military services. In any event, the fact that the changes cited occurred in the period after 1919 is sufficient for this study, since it was only after 1919 that the growth in direct bank loans to business was interrupted.

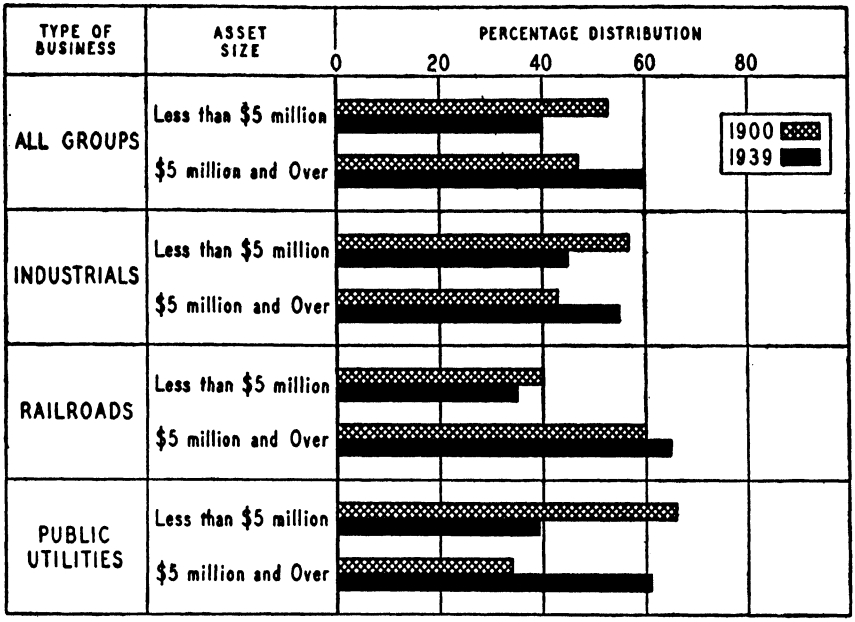
Paralleling changes in the relative importance of the main industrial divisions of the economy were changes in the relative contribution of selected manufacturing industries to total manufacturing output (Chart 13). The significant fact about these data is that, in general, the manufacturing subdivisions which showed the greatest percentage increase in output-contribution after 1899 were among those industries that relied least on notes payable for the financing of their assets. On the other hand, the manufacturing subdivisions that tended to depend most heavily on banks for their financing showed only a moderate rate of expansion, or even some decline.

EFFECTS OF CHANGING SIZE OF BUSINESS ON CREDIT DEMANDS

As pointed out in Chapter 1, the small and medium-sized concern provided the major market for bank loan credit around 1940. Doubtless the demand from this size group of enterprises was even greater in 1900, and, therefore, it is of interest to ask what happened to the average size of business concern between 1900 and 1940. Over these years a decreasing proportion of the number of business concerns was accounting for an increasing proportion of the total volume of production and trade. For part of this period, 1923–27, this is indicated by the fact that sales of a sample of large manufacturing and trade corporations increased 67 percent while the value of product of all business enterprises increased only 6 percent.[1]

[1] Albert R. Koch, *The Financing of Large Corporations, 1920–1939* (National Bureau of Economic Research, Financial Research Program, 1943) p. 15.

Chart 14 — PERCENTAGE DISTRIBUTION, BY TYPE OF BUSINESS AND ASSET SIZE, OF NUMBER OF NONFINANCIAL BUSINESSES HAVING CORPORATE BONDS OUTSTANDING, 1900 AND 1939



For each major type of business, corporations with assets of $5 million and over comprised a larger percentage of all corporations with bonds outstanding in 1939 than they did in 1900.

Other evidence regarding changes in the size composition of business during this period is more indirect. Of the relevant and available information, the most comprehensive and useful is that relating to the sizes of concerns having corporate bonds outstanding in 1900 and 1939. These data reveal a shift toward larger average size in each of the major industrial divisions (Chart 14). The real changes that occurred may have been greater than indicated, however, since the data are probably more representative of the small and medium-sized concern in 1940 than in 1900.

A shift toward larger size in business enterprises is indicated also by data based on a sample of business listings drawn from the

Reference Book of Dun & Bradstreet, Inc., for 1900, 1920, and 1940, showing what percentage of the total number of concerns had net worth in excess of $200,000, and by data prepared for the Temporary National Economic Committee, giving percentage distributions of establishments in 1914 and 1937 according to the number of wage earners employed. The Dun & Bradstreet data (Table 10) reveal a shift toward larger average size between 1900 and 1940 in every industrial division except wholesale trade, with the shift particularly marked for manufacturing and mining concerns, two categories which are of major importance in the total demand by business for credit. The tendency for the average size of wholesaling concerns to decline is especially important, since this is the one type of concern for which dependence on bank credit increases in relative importance as asset size increases.

The TNEC data reveal that establishments employing fewer than twenty-one employees constituted 73.6 percent of all establishments in 1914 and 69.2 percent in 1937. In the field of retail trade notable changes were brought about by the growth of mail-order, chain, and department stores. These types of merchandising were of negligible importance at the turn of the century; by 1935, however, chain stores, for example, were making nearly one-fourth of all retail sales, selling over a third of the groceries, half of the shoes, and over nine-tenths of the variety goods.

Table 10—PERCENTAGE OF NUMBER OF CONCERNS WITH NET WORTH IN EXCESS OF $200,000, BY MAJOR INDUSTRIAL DIVISIONS, 1900, 1920, AND 1940[a]

Industrial Division	*1900*	*1920*	*1940*
Manufacturing	4.0%	7.6%	9.3%
Wholesale[b]	11.3	15.9	9.7
Retail	.2	.3	.3
Service	.3	.6	.8
Construction	.3	.4	.8
Mining	1.6	4.6	13.4
Miscellaneous	1.0	1.5	1.1
TOTAL SAMPLE	1.1%	1.7%	1.8%

[a] Estimates of the National Bureau of Economic Research, Financial Research Program, based on a sample drawn from *Reference Book of Dun & Bradstreet, Inc.*, 1900, 1920, and 1940.

[b] Includes concerns dealing in both wholesale and retail trade.

From this scattered evidence, and from the relationships observed in Chapter 1 — namely, that larger concerns are in general less dependent on banks for credit than are smaller concerns — it may be concluded that business demand for credit in general, and for bank credit in particular, was weakened in the period 1900–1940 by shifts in the distribution of nonfinancial businesses by asset size classes.

CHANGES IN BUSINESS ASSETS AND THEIR EFFECTS ON THE CREDIT MARKET

Changes after 1900 in the asset structure of nonfinancial business are of significance, since (as pointed out in Chapter 1) the types of assets held by a business enterprise strongly influence the amount and kind of funds which the management uses for financing. Unfortunately, data on assets for business as a whole do not exist back to 1900, but several samples of corporation financial statements have been assembled extending back to 1900, 1914, or 1916. These samples cover (1) large manufacturing and large trade enterprises, (2) small and medium-sized manufacturing and trade concerns, and (3) a combination of large manufacturing and trade concerns termed an "industrial" group;[2] other tabulations are for public utilities and railroads. Findings based on a study of these samples will be stated here in a general manner, indicating the broad character of the changes that occurred in assets and the relation of these changes to credit demand.

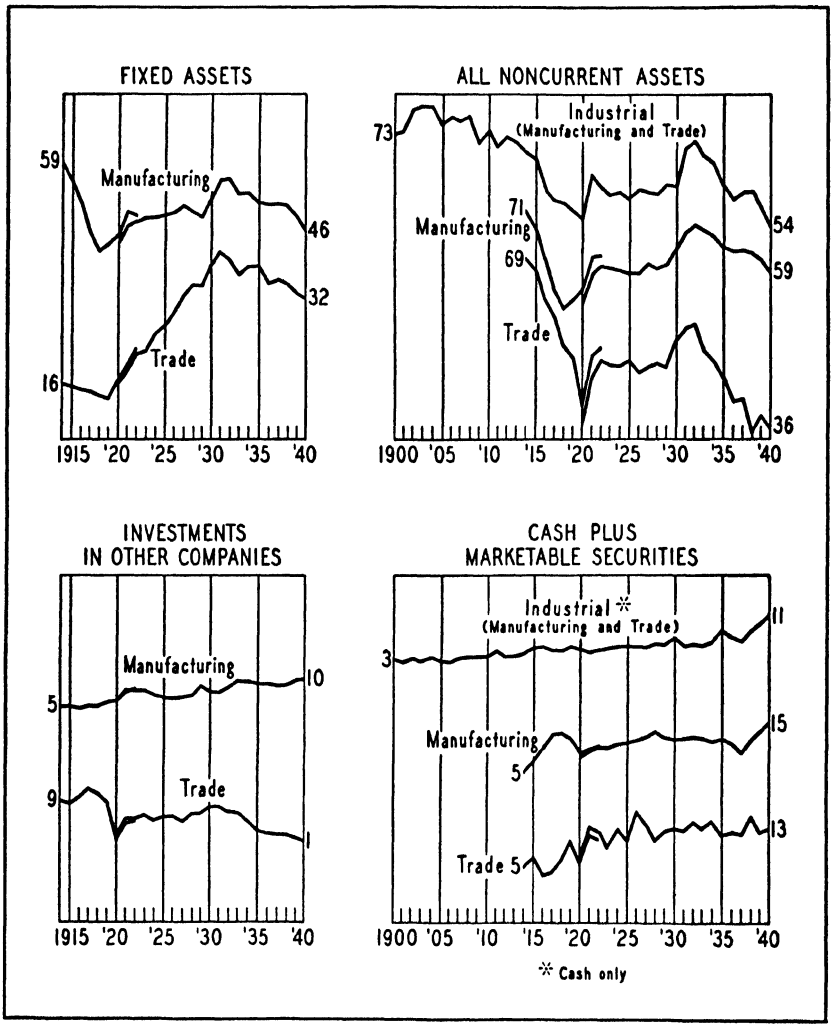
Fixed Assets[3]

In general, a tendency for fixed assets to grow in relation to total assets would be expected to produce a shift in favor of long-term

[2] The sample data for large manufacturing and trade corporations are described in Albert R. Koch, *op. cit.*, pp. 10–15, and Charles H. Schmidt and Ralph A. Young, *The Effect of War on Business Financing: Manufacturing and Trade, World War I* (National Bureau of Economic Research, Financial Research Program, Our Economy in War, Occasional Paper 10, November 1943) Appendix A. For information covering the large "industrial" group and small and medium-sized concerns, see footnotes 5 and 6, below.

[3] There is, of course, no escape from the fact that on the asset side of the balance sheet the valuation of fixed assets may reflect more closely accounting conventions than financial conditions; nor equally the fact that the element of arbitrariness which this involves is reflected among business liabilities in the net worth item. While it surely is wise to view data on fixed assets and net worth with reserve, it is nonetheless possible to utilize these data to increase our understanding of the financial process and particularly of the changing role in business financing of funds acquired on a debt basis.

hart 15 — RATIOS OF SELECTED ASSET ITEMS TO TOTAL ASSETS FOR SAMPLES OF LARGE MANUFACTURING AND TRADE CORPORATIONS, 1900–1940



For large corporations, the marked rise in noncurrent assets, consisting primarily of fixed assets and investments in other companies, from World War I to the thirties served to place increasing emphasis on long-term financing. The greater liquidity of corporations as measured by the proportion of assets held in the form of cash and marketable securities also affected the demand for funds.

as against short-term financing. What is the evidence with respect to this matter?

Fixed assets of both large manufacturing and large trade concerns during the twenties showed a marked tendency to grow in relation to total assets, and subsequently declined from the level then attained (Chart 15). An analysis of large manufacturing concerns by industrial groups reveals that in most cases the trend was much like that for all groups combined; only in a few industries — particularly food manufacturing — did fixed assets tend to become less important during the twenties. It is especially notable that the petroleum industry, which was one of the most rapidly growing segments of the manufacturing economy, showed marked increases in its proportion of fixed to total assets.

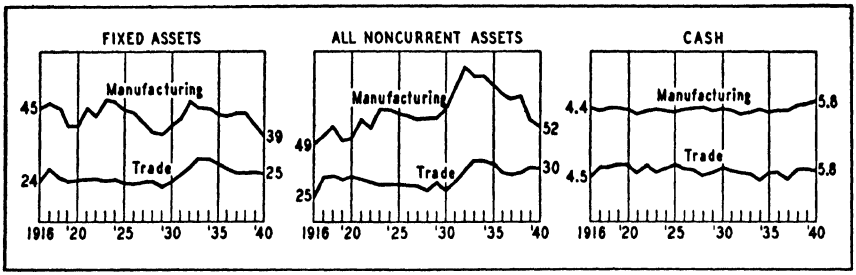
At least during the years from the end of World War I to the early thirties, the effect of an increase of considerable magnitude in the relative importance of fixed assets was probably to shift the focus of interest from short-term to long-term financing.[4] However, there is no basis for concluding that it also strengthened the demand for long-term debt relative to the demand for equity funds.

As for small and medium-sized corporations, the ratios of fixed to total assets for the samples available fluctuated within a narrow range during the entire period studied (Chart 16).[5]

[4] See Arthur Stone Dewing, *The Financial Policy of Corporations* (New York, Third Revised Edition, 1934) pp. 471–76. Dewing summarizes a 1929 study showing that the demand for short-term bank credit was reduced by a rising ratio of fixed capital to current capital for a group of 169 manufacturing and trade corporations: 2.05 in 1919, 4.35 in 1931.

[5] Samples of Wisconsin manufacturing and trade concerns with total assets of $5 million and less, a sample of medium-sized Massachusetts corporations going back to 1903, and samples of corporations in five small manufacturing industries covering the period 1926–36 yield evidences of increase and decrease in the fixed capital component of total assets for certain years and for certain industrial groups, but in general the data indicate stability in this ratio. For descriptions of the samples see Charles L. Merwin, *Financing Small Corporations in Five Manufacturing Industries, 1926–36* (National Bureau of Economic Research, Financial Research Program, 1942) Chapter 2, and Sidney S. Alexander, *Changes in the Financial Structure of American Business Enterprise, 1900–1940* (National Bureau of Economic Resarch, Financial Research Program, ms. 1943) Appendix A. A comparison of the Wisconsin sample ratios with ratios computed from *Statistics of Income* data for all corporations in the $50,000 to $250,000 and $250,000 to $5,000,000 size groups shows that the direction of movement of the Wisconsin sample ratios is generally consistent with the behavior of ratios for all small and medium-sized concerns but that the level is sometimes different. This difference in level is not important in the present study, however, since the analysis depends primarily on the direction of change in asset structure.

Chart 16 — Ratios of Selected Asset Items to Total Assets for Samples of Small and Medium-Sized Manufacturing and Trade Corporations, 1916–40



Greater bank indebtedness of small and medium-sized corporations, compared with large corporations, after World War I may be explained in part by the marked differences between the two groups in changes in asset structure.

The fixed asset component of public utilities showed virtually no change over the period, and that of railroads increased only moderately. In view of these facts it is likely that the changes in the demand for credit by public utilities and railroads, compared with demands from other businesses, were due primarily to the relative growth of public utilities and railroads within the economy as a whole. An implication of this relative growth is that the average ratio of fixed assets to total assets for the whole economy was raised, thus tending to promote a shift toward the use of long-term funds.

Investments in Other Companies

Investments in other companies (as distinct from marketable securities) are asset items that a company would be expected to finance with long-term funds. It is significant, therefore, that among large manufacturing corporations investments in other concerns grew rather steadily throughout the entire period studied, increasing from around 5 percent of total assets in 1914 to about 10 percent in 1940 (Chart 15). This is also true of various manufacturing subgroups, and, from 1920 to 1930, of large trade companies. For a sample of small and medium-sized Wisconsin manu-

facturing concerns, investments (which in this case include marketable securities) rose fairly steadily in relative importance from 1916 to 1935, but those for the small and medium-sized trade concerns remained about constant. Thus the tendency for business concerns to hold investments in other companies, reflecting the growth of the business concern as a financing agency as well as the consolidation movement of the period, increased after 1914, and was especially marked during the twenties. As in the case of fixed assets, this tendency served to place increasing emphasis on long-term financing.

Total Noncurrent Assets

In order to obtain a measure of what may be termed total "noncurrent" assets, fixed assets may be combined with investments in other companies and with the relatively small item "other noncurrent assets." Ratios of noncurrent to total assets for samples of large manufacturing and trade concerns are available for the period from 1914 to 1940, and for a sample of large industrial corporations beginning in 1900.[6] These data suggest an important conclusion, namely, that for most of the period from 1900 to 1932 total bank loans to business moved inversely with the ratios of noncurrent to total assets; during the twenties both bank loans to business and the ratios of noncurrent to total assets were nearly constant. This relationship between the asset structure of business and outstanding bank loans to business reflects the broad causal connection between the character of business assets and the types of funds which have been used in their financing.

Cash and Marketable Securities

Since the demand for financing facilities is affected by the holding of cash and its equivalent (i.e., marketable securities), considerable significance attaches to the changes between 1900 and 1940 in this measure of business liquidity. The analysis is complex, however, and can best be presented as changes that took place in three aspects

[6] The sample for large industrial corporations is a changing sample based on large manufacturing and a few large trade corporations taken from Moody's *Manuals*. Because of the changing composition of the sample, the median of individual company ratios is used for the analysis of the sample of large industrial concerns, rather than a ratio of aggregated balance sheet items which is used in the analysis of other samples of large manufacturing and trade corporations.

of the cash position of corporations: the ratio of cash to total assets; the relation between cash holdings and the volume of transactions calling for the use of cash (which determines whether a business has "free" cash); and the role of the cash account in supplying and absorbing funds for corporate enterprises during periods of expansion and contraction.

Over the period 1900 to 1940 the ratio of cash to total assets for the sample of large industrial corporations tended generally upward, with the rise particularly marked after 1937 (Chart 15). For samples of industrial subgroups of large manufacturing concerns, which extend from 1914 to 1940, it is found that in certain cases — e.g., tobacco, textiles, and meat packing — the ratios of cash and its equivalent changed very little; in other cases — e.g., automobiles, chemicals, food, and machinery — the ratios rose fairly steadily. Among large trade corporations the trend was generally upward after 1916. On the other hand, small and medium-sized Wisconsin manufacturing and trade concerns showed no strong tendency to hold an increasing proportion of their assets in the form of cash (Chart 16).

A tendency for concerns to hold "excess" amounts of cash, if it did prevail, clearly would suggest a weakening demand for external funds. Examination of the relation between cash holdings of corporations and the volume of transactions calling for the use of cash reveals that "(1) in the twenties transaction needs appear to have determined the level of cash balances of large manufacturing corporations, if year-to-year fluctuations are neglected . . . (2) in the thirties a large part of the cash balances of large manufacturing corporations was 'free' cash — an increasing part in recession and a decreasing part in expansion, (3) for medium-sized and small manufacturing corporations, 'free' cash increased after 1929, but in relation to transaction cash it was not so great as in the case of large manufacturing corporations."[7]

Finally, it is found that the process of accumulation and depletion of cash by business concerns is significantly related to their use of outside funds. The data indicate that during periods of business contraction in the thirties, when ratios of short-term debt to total

[7] Friedrich A. Lutz, *Corporate Cash Balances, 1914–43: Manufacturing and Trade* (National Bureau of Economic Research, Financial Research Program, 1945) p. 50. For description of method of estimating "free" cash, see Lutz, pp. 40–41.

assets were low, large companies could hardly avoid accumulating large cash balances, since even a modest rise of the cash ratio was sufficient to provide the means for extinguishing debt. For these companies the only alternatives to cash accumulation during periods of contraction were retirement of long-term debt and the disbursement of unearned dividends.

As a result of cash accumulation, a subsequent increase of sales could be handled by a transformation of cash into inventory and other assets. Only when activity had risen to a level at which an expansion of assets was required, and even then only when asset expansion was prolonged and at a high rate, was substantial recourse to outside sources of funds essential. Thus, if the depression were severe and the contraction of operating assets led to very large accumulations of cash, the effect on the demand for short-term credit would be prolonged as well as immediate. In some such fashion the depression of the early thirties served not only to reduce the demand for bank credit during the contraction years but limited the demand for credit during the subsequent expansion below what it would otherwise have been.

The cash holdings policy of small and medium-sized concerns, at least as illustrated by the sample based upon Wisconsin corporations, was quite different. Since corporations of this size group had ratios of notes payable to total assets that were higher than those of large concerns, a greater transformation of noncash into cash assets was required before any ultimate increase in the ratio of cash to total assets could take place. As cash was released from operating assets during a period of business contraction it was used to retire debt and, therefore, the concerns were more needful of outside financing facilities when an expansion of assets was called for. The general result was that small concerns were, relatively speaking, both more heavily and more persistently indebted to banks than were the large concerns.

Trade credit used by manufacturing and trade enterprises was far less affected by varying cash conditions than was bank credit. The use of trade credit seems to have been determined almost automatically by purchases. This relative immunity to cash conditions partly accounted for the fact that trade credit was a more persistent element than bank credit in the short-term debt structure of manufacturing and trade companies.

Receivables

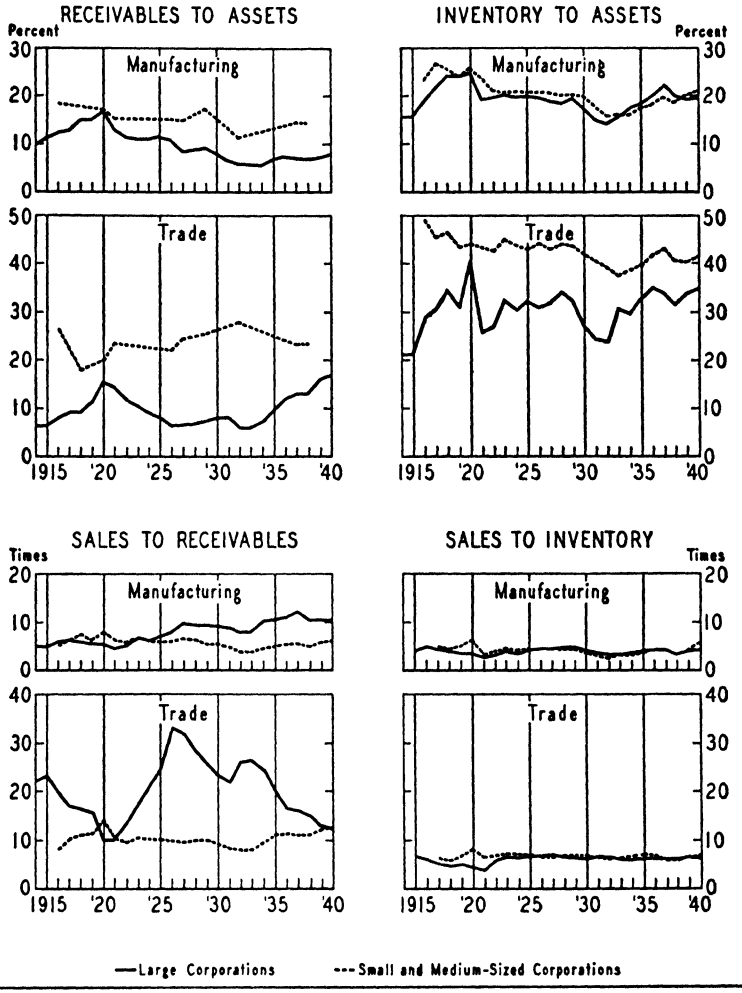
On the whole between 1914 and 1940, the structural and procedural changes in American business affecting receivables were such as to weaken the demand for short-term bank credit to business. From 1914 to 1920 an expanding volume of business and sharply rising prices caused receivables of large corporations to increase relative to total assets, and encouraged the greater short-term bank financing which marked this period. The deflation of the receivables item in 1921–22 coincided with declining business borrowings from the banks. And, finally, the failure of receivables to grow commensurately with other business assets during the twenties was doubtless a significant factor in preventing bank loans to business from rising appreciably during that period of general economic and financial growth. As indicated in Chart 17, the only receivables to total assets ratio showing a tendency to advance during the twenties is that for small and medium-sized trade concerns. A further point of interest is that throughout the entire period studied the relative importance of receivables among assets was greater for small and medium-sized concerns than for large companies.

The ratio of sales to receivables reflects the same general structural change in business assets as does the ratio of receivables to total assets; the sales ratio, however, has the advantage of being a direct measure of the increasing tendency for sales to be made on a cash basis. For large manufacturing concerns the period 1920–37 was one during which cash selling (or sales on increasingly shorter credit terms) became more extensive, especially in the early part of the period when readjustments were being made following World War I. For large trade companies the ratio rose sharply during the early and middle twenties and then declined between 1927 and 1940, reflecting greater extensions of consumer credit. Furthermore, within this size group those industries whose financial growth was most marked either evidenced an especially strong tendency toward a higher ratio of sales to receivables or held persistently to a ratio considerably higher than that characteristic of industries growing less rapidly.

Inventory

The credit market in the first three or four decades of the century was also influenced by changes in the inventory-holding policies of

Chart 17 — SELECTED ASSET AND SALES RATIOS FOR SAMPLES OF MANUFACTURING AND TRADE CORPORATIONS, 1914–40



For large manufacturing corporations especially, receivables tended to become less important relative to total assets during the twenties, and sales volume tended to generate fewer receivables. Inventory as a proportion of total assets for this group showed little over-all change, while for trade corporations the relative importance of inventory increased somewhat. For the period as a whole no change in the turnover of inventory is apparent, but during the twenties inventory was used with increasing efficiency by both groups.

nonfinancial business. For large manufacturing corporations, inventory as a proportion of total assets showed little over-all change between 1914 and 1940, although some decline did occur in the twenties and early thirties (Chart 17). The situation was different, however, for large trade concerns; in this case the relative importance of inventory grew somewhat during the whole period, and markedly in the twenties and again in the middle thirties. As for small and medium-sized concerns in both manufacturing and trade, the ratios were distinctly lower at the end of the period than at the beginning.

The quantitative degree to which this structural change in assets influenced the business credit market cannot, of course, be assessed definitely. But it is clear that a reduction in the relative importance of the current asset most closely linked to the use of short-term credit would tend to produce a decline in the requirements for short-term financing. Stated differently, the decrease in the relative importance of inventory, together with changes in other asset items, doubtless prevented short-term bank credit from sharing fully in the business expansion of the twenties.

Confirming these findings are ratios of sales to inventory, which reflect the efficiency of inventory use (Chart 17). In nearly all branches of manufacturing the efficiency with which inventory was used increased somewhat during the twenties, but when ratios for the beginning and the end of the period 1915–40 are compared there is no indication of long-term improvement. Among large integrated trade concerns there was no tendency toward increased efficiency in the use of inventory during the twenties, with the exception of large department stores.

Summary

During both World War I and the period of continued price increase ending in 1920, changes in the asset structure of business — such as a declining proportion of fixed to total assets and increasing ratios of receivables and inventory to total assets and to sales — clearly strengthened the demand for short-term credit which occurred at that time. Asset changes from 1920 to 1922, also responsive to reductions in the price level, contributed to the short-term debt liquidation of those years.

The fact that bank loans to business did not increase in the expansionary period following the price decline after World War I may also be explained in part by certain structural changes in business assets. Fixed assets grew in relative importance, while the assets normally associated with the use of short-term funds, namely, inventory and receivables, became relatively less important elements in the business asset structure. That these changes were especially marked in the industries which were growing most rapidly, thus affecting the average asset structure of the economy as a whole, further enhanced their effect on the demand for short-term financing.

Finally, while the decline in short-term credit which began in 1929, and the increase that followed during the recovery of the middle thirties, were dominated by cyclical changes in economic activity, changes in asset structure also contributed to changes in the demand for credit by business during those years. This fact is indicated by the increase during the early thirties in the amount of "free" cash holdings, and by the continued decline in the ratio of inventory and of receivables to total assets. Likewise the recovery of bank loans to business after 1935 seems to have been affected by asset-structure changes calculated to promote the increased use of short-term funds.

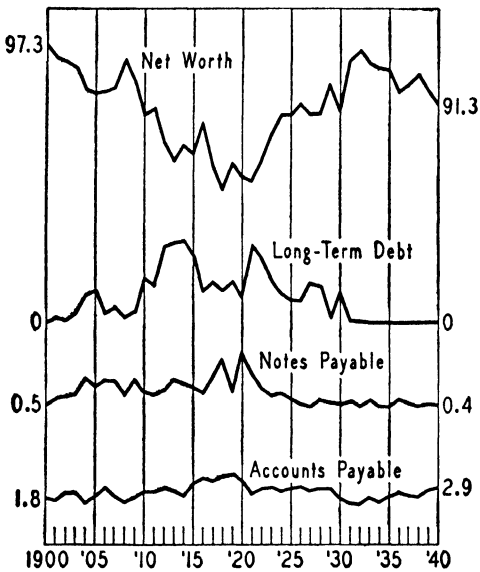
CHANGES IN BUSINESS LIABILITIES AND THEIR EFFECTS ON THE CREDIT MARKET

The liability structure of nonfinancial business — that is, the division of business liabilities into net worth and debt, and of the latter into various classes of debt — reflects all forces influencing the financing policies of business. Among these forces are changes in asset structure, discussed above, and also changing preferences on the part of business management as to financing methods, which may be quite independent of changes in the character of the assets to be financed.

Net Worth

The outstanding feature of corporate financial structure in the entire period 1900 to 1940 is the preponderance of ownership funds

Chart 18 — SELECTED LIABILITY ITEMS IN PERCENT OF TOTAL LIABILITIES FOR A COMBINED SAMPLE OF LARGE MANUFACTURING AND TRADE CORPORATIONS, 1900–1940



From 1900 to 1920, debt items grew as net worth fell; until 1932 the opposite was true. After 1932 debt items either stabilized or began to rise, while net worth declined.

as a means of financing business.[8] This has to be borne in mind in the following discussion of changes in liability structure. It means that other types of funds represent very small percentages of the total funds in use; as a result, changes in the relative position of any of these other items (notes payable, for example, which is generally small in terms of total assets) are highly significant in terms of total demand for the type of funds in question. Thus, if total assets remain the same, a rise from 2 to 4 percent in the ratio of notes payable to total assets, while of negligible effect on the ratio of equity to total funds, means a doubling of the absolute amount of the short-term funds borrowed.

Certain significant changes in the relative importance of equity funds during the period 1900–1940 are revealed by data covering a sample of large manufacturing and trade corporations, combined (Chart 18). These data show that the ratio of net worth to total liabilities declined between 1900 and 1921 — especially after 1914 as debt financing was utilized for war production and postwar inventory expansion; that from 1922 until 1932 the relative importance of ownership funds increased fairly steadily; and that this

[8] See footnote 3, above.

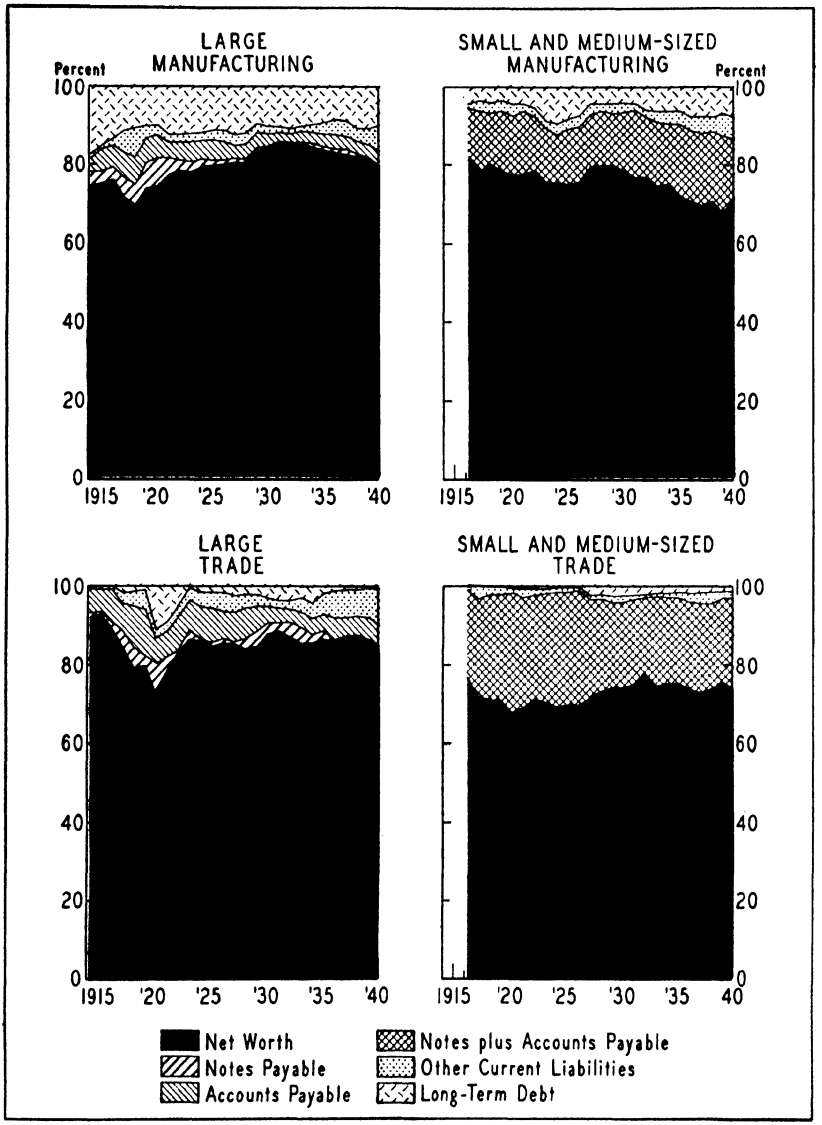
increase was followed by a decline through 1940. These findings, in general, are confirmed by other samples of financial statements (Chart 19),[9] and by the industrial subdivisions of these samples. To be sure, the tendency for equity funds to increase in relative importance during the twenties was sharper in some industries than in others. The rise was especially evident for concerns in meat packing and tobacco and to a mild extent for machinery manufacturers, but an increase did not occur among companies in the building materials, rubber, and petroleum industries. For these industries the failure of equity to show any noticeable growth in importance may be attributed, to a great extent, to the fact that it had already reached a higher than average level. For large trade companies the decline during World War I was much more marked than for large manufacturing companies and it continued until 1920; but after the sharp deflation of current liabilities in 1921–22 there was a growth in the importance of equity funds, although it was somewhat less for large trade than for large manufacturing concerns.

Data on the liability structure of small and medium-sized Wisconsin concerns, taken as a whole, indicate an upward drift in the percentage of equity funds to total assets among trade concerns and a downward drift among manufacturing companies. This attrition of net worth shown by manufacturing concerns is confirmed by data for a sample of Massachusetts corporations of small and medium size and by TNEC data for small and medium-sized concerns in five manufacturing industries over the years 1926–36. The importance of this development to credit extending institutions is heightened by the fact that the level of the ratio of net worth to total liabilities for small and medium-sized concerns is persistently below the level characteristic of large concerns.

Among railroad and public utility companies, where equity funds have traditionally been less important than long-term debt funds in comparison with other industrial groups, the role of equity funds increased after the end of World War I. The change was not marked, however.

[9] The differences observable can be attributed in part to the fact that the data in Chart 19 are ratios of aggregated balance sheet items for manufacturing and trade concerns examined separately, while the data in Chart 18 are medians of individual ratios for a combination of large manufacturing and trade concerns.

Chart 19 — Liability Structure of Samples of Manufacturing and Trade Corporations, 1914–40



In all groups of concerns, equity funds exceeded all other types. World War I was a period of relatively increasing debt, especially the short-term type. During the twenties, debt fell relative to equity except for small and medium-sized concerns.

Debt

At least for large industrial corporations, the corporate financial history of the first half of the forty-year period under review was significantly different from that of the second half. In the first twenty years, broadly speaking, large manufacturing and trade concerns financed an increasing, though always modest, proportion of their total assets with borrowed funds (Chart 18). While this increase in debt was not continuous and was confined within relatively small limits, the direction is nonetheless clear. From 1920 until the early thirties the general drift of the ratio of debt to total liabilities was downward, reflecting the increase in the relative importance of equity funds commented on above. After 1932 the tendency for debt to increase was most noticeable for accounts payable and "other" current liabilities.

Among small and medium-sized trade concerns there was also a general tendency for the relative importance of debt to contract after 1920; but for small and medium-sized manufacturing corporations the importance of debt relative to equity showed a fairly persistent rise from 1916 to 1940, a fact which is in sharp contrast to the results for other sectors of the business economy.

The implications of these facts for the business credit market are clear. In the first twenty years of the century the demand for debt funds was promoted by two expansionary forces: first, the growth of the economic system as a whole, and second, the tendency for business management to rely increasingly on debt funds in financing assets. From 1920 to the early thirties, on the other hand, the opposite was true: not only did the rate of growth of the economic system moderate considerably, but debt became a less important element in corporate financing.

Within the general category of debt, what changes occurred in the relative importance of short-term and long-term debt and, within the limited category of short-term debt, between notes and accounts payable? For the sample of large industrial companies, which is heavily weighted by manufacturing concerns, the ratios of both long-term and short-term debt to total assets increased from 1900 to 1914, although the course of the former was the more erratic. During World War I the short-term debt element gained considerably while long-term debt was reduced, a development

that would be expected in view of the financial problems of war production; while in the twenties and early thirties the ratios of both elements to total assets declined.[10]

The ratios for the two categories of short-term debt — i.e., notes and accounts payable which may be taken to be broadly representative of bank credit and trade credit, respectively — increased between 1900 and 1920, with that for notes payable rising the more sharply, to a level above accounts payable. In the declines that occurred during the debt deflation of the second twenty years of the century, notes payable fell to, and remained at, a lower level than accounts payable.

At several points in the analysis of the 1940 business credit market, in Chapters 1 and 2, it was remarked that accounts payable represented a far more frequent and quantitatively important form of business financing than did notes payable. The data in the present chapter reveal that this has always been a feature of large manufacturing and trade corporations and probably also of small and medium-sized concerns. Our materials at present are so limited, however, that it is impossible to say what proportion of trade credit is substitutive for some other form of financing, and what part merely reflects the fact that it is convenient and conventional for business concerns to buy merchandise on open account, with the result that even though concerns take up these accounts promptly there is always a substantial "float" of trade debt in the business system. For a thorough understanding of the business credit market, more detailed data are essential on trade credit, and on its relation to other forms of asset financing at different times and for different types of concerns.

Self-Financing by Business

Since the business credit market would be adversely affected by a tendency toward financial self-sufficiency among business concerns, any long-run changes that may have occurred in the comparative importance of what may be called "external" and "internal" funds are significant. The term "external" funds means those acquired

[10] Among large trade concerns long-term debt practically disappeared, which accounts in part for the difference between the sample of large industrial corporations (including several large trade concerns) in Chart 18 and the sample for large manufacturing companies shown in Chart 19.

from sources outside the business, and "internal" funds, those acquired through the retention of corporate earnings.[11]

The first observation suggested by the data in Chart 20 is that the tendency or "propensity" of corporations to retain earnings — which may be termed the rate of earnings retention — changed very little, when measured by the ratio of earnings retained over a given year to total assets at the beginning of the year;[12] in fact it might be described as showing a slight downward drift. Second, the rate of total asset expansion, measured by the ratio of asset expansion over a given year to total assets at the beginning of the year, was a more variable element in corporate finance than was the rate of earnings retention. Third, since the use of funds acquired externally is measured by the difference between these two rates, it follows that changes in the degree of dependence on external funds was more nearly determined by changes in the rate of total asset expansion than by changes in the propensity of business to retain earnings.

Manufacturing and trade concerns apparently did not become more independent of outside financing to meet their needs for asset expansion. On the contrary, it appears that whenever asset expansion proceeded at a rapid, and particularly at an accelerating, rate, a vigorous demand for external funds was generated; but this demand was not sustained by the mere maintenance of a given rate of expansion, even at a relatively high level. In the early stages of expansion business concerns may overestimate their needs for external financing; furthermore, in such a period it is almost certain that profits will be high and that retained earnings will increase more rapidly than dividend disbursements.

These generalizations regarding the relation between retained earnings and the need for external funds are broadly confirmed by the record from 1915 to 1940. Among large manufacturing corporations, retained earnings as a source of funds for business expan-

[11] Granted that in certain instances a concern may achieve a higher degree of productivity through the investment of depreciation accruals, no expansion of assets results. Since the present study is concerned with the financing of asset expansion, depreciation accruals are not viewed as a means of self-financing. It may be noted, however, that gross property expenditure, inclusive of depreciation outlays (replacements), shows a remarkably constant relationship to sales from 1924 to 1942 for our sample of large manufacturing concerns.

[12] This is the most significant measure for the present study because it relates retained earnings directly to business assets, which comprise the quantity to be financed.

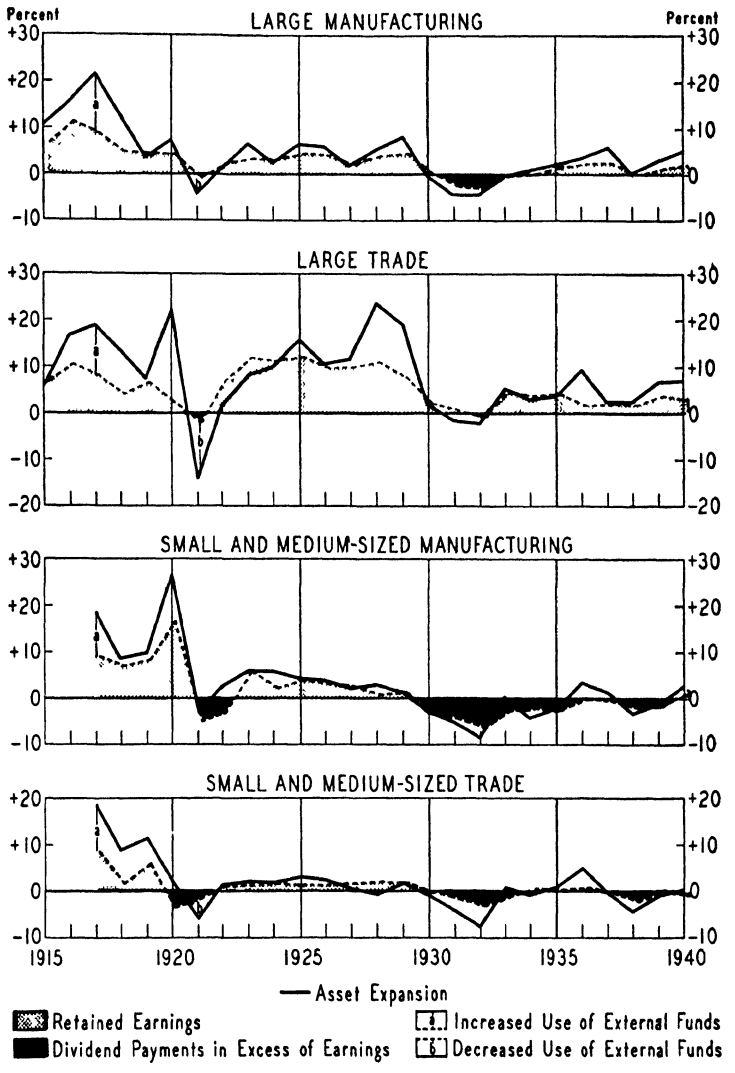
sion were most important in the twenties, since the financial problem for these concerns, as measured by total asset expansion, was far less in the twenties than in the war years. For large trade enterprises, the rate of asset expansion in the late twenties was as high as in 1915–20; consequently, in both periods these concerns showed about the same degree of dependence on outside funds. In the thirties, however, both asset expansion and earnings retention were at low levels, and except in 1936, 1939, and 1940 large trade corporations made virtually no use of funds other than those accumulated through earnings retention.

The retention of earnings ceased to be an important source of funds for small and medium-sized companies at the outset of the depression in 1930. During earlier years internal funds had persistently supplied the major part of the funds needed for asset expansion. In the thirties, however, these smaller companies were using up rather than accumulating funds; outside funds acquired were largely in the form of short-term bank borrowings.

All types of external funds shared the broad demand created by the high rate of asset expansion during World War I. This fact is reflected especially in the rising importance of notes payable among the liabilities of large corporations. During the twenties and early thirties, when the balance shifted definitely toward equity financing, the debt funds acquired were increasingly of the long-term variety. The experience of large and small concerns differed somewhat. Over the whole period, 1916–40, short-term external funds, as a means of financing asset expansion, were more important for small and medium-sized trade concerns than they were for large corporations. This was also true for small and medium-sized manufacturing corporations, although for this group long-term funds showed a tendency to increase in importance during the twenties.

Summarizing, the business credit market during the twenties was affected by two principal developments: first, business assets expanded at a slower rate from 1923 to 1928 than during the preceding war period, which meant that there was less scope for external financing; and, second, a shift toward equity financing occurred, especially among large concerns, which was an important reason for the failure of bank loans to business to increase. In the years 1929 to 1935 the dominant forces affecting the business credit

Chart 20 — ASSET EXPANSION, RETAINED EARNINGS, AND EXTERNAL FUNDS ACQUIRED, IN PERCENT OF BEGINNING-OF-YEAR TOTAL ASSETS, FOR SAMPLES OF MANUFACTURING AND TRADE CORPORATIONS, 1915–40



Asset expansion varied considerably more than retained earnings. As a result, access to external funds was needed mainly in years in which asset expansion was high.

market were the contraction of total business assets and the tendency for contractive forces to have a greater effect on notes payable than on other business liabilities. Following 1935 there was a reversal of this situation; and it is interesting to note that large manufacturing corporations in 1937, when the rate of total asset expansion was nearly as high as in 1929, depended as much on external sources of funds as during any year of the twenties.

CHANGING CHARACTER OF THE SHORT-TERM CREDIT MARKET

Relation of Bank Credit to Trade Credit

After the early twenties total short-term credit to business came to consist increasingly of trade credit and decreasingly of credit extended directly by banks. Among large manufacturing companies in the twenties accounts payable, which may be taken as a measure of trade credit, fell less in proportion to total assets than did notes payable. This tendency for trade credit to grow relative to bank credit continued during the recovery years of the thirties when, as would be expected, indebtedness on accounts payable rose more promptly and more substantially than did the notes payable of manufacturing concerns. The same general experience seems to have been shared by large trade concerns, including department stores, but not so markedly as among large manufacturing companies.

The small and medium-sized manufacturing corporations followed fairly well the same pattern as the large manufacturing concerns; that is, trade credit grew relative to bank credit. But for small and medium-sized trade concerns the ratio of accounts to notes payable fell during the twenties, indicating an increasing relative dependence on bank credit as contrasted with trade supplier credit.

As pointed out above, the importance of trade credit as an element in corporate financial structure and the fact that it exceeds bank credit in magnitude make it particularly unfortunate that so little is known about its character and composition. Because of this gap in our knowledge the remainder of this discussion must be limited to changes in that section of the short-term credit market represented by notes payable.

Industry of Borrower

The earliest date for which information is available on the industrial characteristics of commercial bank borrowers is 1920. In that year the Comptroller of the Currency requested all national banks to furnish, as of November 15 ". . . a statement showing the amount of loans and accommodations granted by them to certain classes of borrowers arranged according to the occupation." Reports received covered only 70 percent of the total loans and discounts of national banks, but unreported loans presumably were not of the types indicated in the Comptroller's classification, since banks were requested to report on all loans in "certain classes." For comparison with this early cross-section, commercial bank borrowers in 1940 can be classified by industry on the basis of estimates made by the Financial Research Program (Table 11). Margins of error doubtless are present in both distributions, but they probably are not large enough to destroy the value of the data for indicating broad changes since 1920.[18]

The first major change to be noted is the decline in the relative importance of manufacturing and trade borrowers. These two classes combined accounted for close to 50 percent of total loans and discounts in 1920 and only about 20 percent in 1940.

Secondly, finance companies which were borrowers of negligible importance in 1920, occupied a position of prominence in 1940, when they accounted for nearly 9 percent of all loans. This change is doubtless related to the declining importance of manufacturing and trade borrowings, since cash is substituted for the receivables of selling enterprises through finance company operations.

Thirdly, the growth of the public utility group nearly equaled that of the finance companies; public utilities accounted for slightly more than 7 percent of total loans and discounts in 1940, compared with less than 2 percent in 1920.

All these changes in the composition of the borrower clientele of commercial banks conform to the general findings reviewed above relating to the industrial composition of the economy.

[18] Both distributions include agricultural and real estate loans. Since these are not strictly "business loans" in the sense in which business loans have been taken for the purposes of this study, it might be advisable to exclude them from both distributions, but this procedure would not alter the main conclusions drawn from the distribution of total loans as given below.

Table 11 — TOTAL NATIONAL BANK LOANS AND DISCOUNTS, BY INDUSTRY OF BORROWER AND TYPE OF LOAN, 1920 AND 1940
(*dollar figures in millions*)

Industry of Borrower and Type of Loan	*November 15, 1920*[a]		*June 30, 1940*[b]	
	Amount Outstanding	Percent of Total Loans	Amount Outstanding	Percent of Total Loans
Manufacturing	$ 2,863	20.8%	$1,175	12.9%
Wholesale	3,581	26.1	296	3.2
Retail			440	4.8
Public utilities, including railroads	225	1.6	663	7.2
Agriculture	1,999	14.5	622	6.8
Construction	[c]	[c]	76	.8
Mining	[c]	[c]	76	.8
Service	[c]	[c]	76	.8
Commercial finance companies and factors	[c]	[c]	804	8.8
Professional men	375	2.7	[c]	...
Real estate	232[b]	1.7	2,003	21.9
Brokers and dealers in securities	664	4.7	169	1.8
Banks	[c]	[c]	19	.2
Acceptances	171[b]	1.2	83	.9
Commercial paper bought in the open market	[c]	[c]	215	2.3
Other loans against securities	2,489[b]	18.2	1,573	17.2
Unclassified[d]	1,166	8.5	884	9.6
TOTAL	$13,765	100.0%	$9,174	100.0%

[a] Based on data from *Report of the Comptroller of the Currency*, 1920, Vol. I, p. 32.
[b] Estimates of the National Bureau of Economic Research, Financial Research Program.
[c] Contained in "Unclassified."
[d] Includes consumer loans; loans to personal loan companies, industrial banks, and credit unions; loans (other than real estate) to building and loan associations, insurance companies, Federal Land and Intermediate Credit Banks, Federal Home Loan Banks, clubs, churches, hospitals, schools, and charitable institutions.

Size of Borrowing Concerns

While no direct evidence is available for measuring changes in the average size of borrowing concerns, certain generalizations can be made on the basis of indirect evidence. A sample of 84 large manufacturing corporations shows that they were relatively heavy bank

borrowers in 1920 and 1937, years of rapidly accelerating asset expansion (Table 12). However, their relative importance among all business borrowers declined during the twenties and again in the late thirties; by 1939 their borrowings were less important than in 1914. Apparently the growth of the large business concern in this sector of the economy was insufficient over the entire period to maintain the relative importance of large companies among bank borrowers, because large concerns, individually, were becoming less dependent on banks for short-term credit.

An indication that the average size of borrowing concern may have increased is found in the fact that the finance company and the transportation and other public utility industries rose in importance among bank borrowers; the major share of the business of all these groups was conducted by concerns of large and increasing average size. On the other hand, listings in the *Reference Book of Dun & Bradstreet, Inc.* reveal that between 1920 and 1940 wholesalers, traditionally frequent and heavy borrowers from banks, declined

Table 12 — NOTES PAYABLE OF 84 LARGE MANUFACTURING CORPORATIONS COMPARED WITH BUSINESS LOANS OF NATIONAL BANKS, 1914–39
(*dollar figures in billions*)

Year	*Notes Payable of 84 Identical Large Manufacturing Corporations*[a] (1)	*Business Loans of All National Banks*[b] (2)	(1) *in Percent of* (2)
1914	$.226	$3.8	5.9%
1915	.221	3.8	5.8
1920	.857	8.1	10.6
1922	.273	6.4	4.3
1929	.162	6.7	2.4
1932	.035	4.4	.8
1933	.065	3.3	2.0
1937	.289	4.5	6.4
1938	.145	4.2	3.5
1939	.088	4.4	2.0

[a] Data as of December 31. Compilations of National Bureau of Economic Research, Financial Research Program.

[b] Data as of June 30. Estimates of National Bureau of Economic Research, Financial Research Program, based on *Report of the Comptroller of the Currency*, annually.

in average size, as measured by net worth, and that service concerns, which are typically small, increased markedly in their relative frequency in the business system. The significance of this latter development is lessened, of course, by the fact that in 1940 service concerns still accounted for a very small segment of the demand for credit from banks.

The relative importance of these conflicting developments cannot be weighed definitely, and therefore it is impossible to reach a final conclusion as to the average size of borrowing concerns in 1940 compared with 1920. Study of the American business credit market around 1940 (Chapter 1) has shown that small and medium-sized concerns were the predominant users of business credit at that time. Perhaps the most that can be said is that there is no positive evidence to suggest that this condition was different in 1920.

Security for Loans

Since loan statistics for early years refer only to total loans and discounts, a study of trends in secured loans to business as distinguished from other loans cannot be made, but data on total loans and discounts of national banks indicate that collateral security tended to become more important. Among this group of banks the proportion of secured loans to total loans rose from 41.1 percent in 1900 to 55.2 percent in 1940. Most of this increase was attributable to the growth in the relative importance of real estate loans. But total loans and discounts exclusive of those secured by real estate mortgage collateral also reveal a trend toward greater use of security devices; the proportion of secured loans to total loans and discounts of national banks, exclusive of loans secured by real estate, rose from 40.8 percent in 1900 to 52.9 percent in 1930 and then fell back to 43.2 percent in 1940. The rise to the peak in 1930 no doubt reflected the growing importance during the twenties of loans secured by stock exchange collateral.

Maturity of Loans

Of special significance is the fact that the average contractual maturity of bank loans tended to increase in the period under review. According to reports to the Comptroller of the Currency, about 57

percent of all bank loans in 1913 were made with original maturities of less than 90 days. In view of the relative unimportance during those early years of loans secured by stock exchange and real estate collateral, it seems reasonable to assign these over-all percentages to business loans, i.e., to say that in 1913 about 57 percent of bank loans to business were made with original maturities of 90 days or less. In 1940, on the other hand, about one-third of the commercial and industrial loans of all commercial banks consisted of term loans with original maturities exceeding one year. On the assumption that one-half of the 1940 loans with maturities of less than one year carried original maturities of more than 90 days, loans with maturities of 90 days or under can be estimated as comprising only slightly more than 30 percent of all business loans in 1940, contrasted with 57 percent in 1913.

MEDIUM-TERM AND LONG-TERM CREDIT TO BUSINESS

Credit Outstanding

Medium- and long-term business credit outstanding rose sharply and fairly continuously between 1900 and 1940. The set-back that occurred in the depression years of the 1930's was followed by an increase which by 1940 carried total outstandings, including bank term loans, to a figure five times greater than in 1900 (Table 13). Coincident with this long-run expansion were significant shifts in the sources from which medium- and long-term business credit was acquired. The principal changes were a considerable decline in the proportion of such funds acquired from the public, and an increase in the proportion acquired from financial institutions. Life insurance companies, whose assets increased nearly eleven-fold between 1906 and 1940, played an outstanding role in this increasing institutionalization of the investment process.

Character of Debt

The changing character of medium-term and long-term business debt may be measured by changes in outstanding corporate bonds and bond offerings during the period 1900–1940. The tendency

Table 13—MEDIUM-TERM AND LONG-TERM DEBT OUTSTANDING OF NONFINANCIAL BUSINESS CORPORATIONS, BY CREDITOR GROUPS, 1900–1940[a]
(*dollar figures in billions*)

	Securities Held by								
	Commercial Banks		*Insurance Companies*		*Other Financial Institutions*		*Public*		*Total Amount*
Year	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent	
1900	$ .42	6.5%	$ .65	10.0%	$ .49	7.5%	$ 4.94	76.0%	$ 6.50
1910	1.39	9.9	1.56	11.1	.91	6.5	10.14	72.4	14.00
1920	1.60	8.4	2.08	10.9	.65	3.4	14.67	77.2	19.00
1930	2.85	9.5	5.16	17.2	1.26	4.2	20.73	69.1	30.00
1935[b]	3.27	11.4	5.82	20.2	2.15	7.5	17.55	61.0	28.79
1940[b]	4.28	13.1	10.10	30.9	1.97	6.0	16.36	50.0	32.71

[a] Estimates of National Bureau of Economic Research, Financial Research Program.
[b] Includes estimates of term loans held by commercial banks, insurance companies, and other financial institutions.

after 1900 was for the average size of outstanding corporate bond issues to increase. Medium-term issues, that is those with an original maturity of from 1 through 15 years, rose in median size from $3.8 million in 1900 to $17.0 million in 1939, while issues of long term, that is those with an original maturity of over 15 years, rose during the same period from $15.0 million to $32.1 million. These observations are confirmed by data on yearly offerings. Bonds of under $1 million represented 13.6 percent of all amounts offered in 1900, 9.4 percent in 1910, 6.7 percent in 1920, 2.1 percent in 1930, and 0.9 percent in 1938. The average asset size of corporations issuing bonds also increased: the median size of concerns issuing medium-term bonds rose from $68 million to $163 million, while the median size of concerns issuing long-term bonds rose from $83.5 million to $191 million.

During the same period marked changes occurred in the industrial composition of the corporate bond market. Among issuers of medium-term bonds the order of relative importance in 1900 was railroads, first; other public utilities, second; and manufacturing concerns, third. By 1939 this order was wholly reversed, with manufacturing in first and railroads in third place, and with the distributive and service industries in a position of far greater importance than in 1900. Among issuers of long-term bonds, public utilities replaced railroads as the most important single industry; distributive and service industries grew substantially in importance; and within the manufacturing group the relative importance of such industries as chemicals, petroleum, rubber, and iron and steel increased.

The term to maturity of corporate bonds tended to become less dispersed and to concentrate at the intermediate level, both the very short and the very long maturities being less important components of the total at the end of the period than at the beginning. Finally, there was a marked tendency away from secured issues, which fell from 91 percent of total outstandings in 1900 to 42 percent in 1939, and a clear tendency, especially among medium-term bonds, for refinancing issues to increase in relative amount.

Since these data refer to all corporate debt securities outstanding or offered during the period, no direct inferences are possible concerning changes in the characteristics of corporate debt securities held by commercial banks. Not only would the exercise of manage-

rial judgment lead banks to hold something other than a random sample of outstanding securities, but banks have been subject to changing legal limitations over the years, which have affected their freedom in investment policy. The character of this legislation will be reviewed in Chapter 8; in general it served increasingly to limit banks to the holding of bonds of relatively high grade. A reasonable conclusion, therefore, is that data on the composition of their portfolios, if available, would reveal the same broad shifts shown by data on all outstanding bonds, namely, tendencies toward larger size of issue and of obligor and toward intermediate-term issues (from five to fifteen years) which would frequently be unsecured.

Direct Lending to Business

In the thirties an outstanding development in the long-term segment of the business credit market, which apparently had no parallel in the short-term segment, was the growth in the relative importance of direct lending, in contrast to the acquisition of funds in the open market. Private placements of corporate securities accounted for 29.2 percent of the total gross proceeds of all corporate securities issued in 1934–35; the percentage rose to 42.4 percent in 1942–43, and then fell to 31.2 percent in 1943–44.

After 1934 certain shifts occurred in the general character of issues privately placed and in the agencies active in this market, but the data pertaining to the shifts are not wholly satisfactory and the period for which they are available is so short that it is hazardous to venture definite conclusions as to the direction of change. In general, the insurance company seems to have become a more important factor in the private placement market, accounting for an estimated 60 percent of private placements in 1934 and about 87 percent in 1939 and 1940. Somewhat erratic variation is found in the industrial composition of private placements; on the whole, industrial corporations became a smaller proportion of the total, and public utilities a larger proportion. Data are not available on the average size and term to maturity of private placements and on changes in these features of the issues over recent years.

In the medium-term field the term loan grew from negligible amounts in 1933 to a point where, in 1940, such loans held by commercial banks equaled one-half of all corporate securities held by the

banks. However, the period for which data on these credits are available is short and it is again hazardous to venture generalizations on changes in the nature of the market up to 1940. The evidence suggests, at least, that the tendency was for term loans to be made in smaller average amounts, increasingly to smaller companies, and, toward the end of the period, increasingly for new money as contrasted with refinancing purposes.

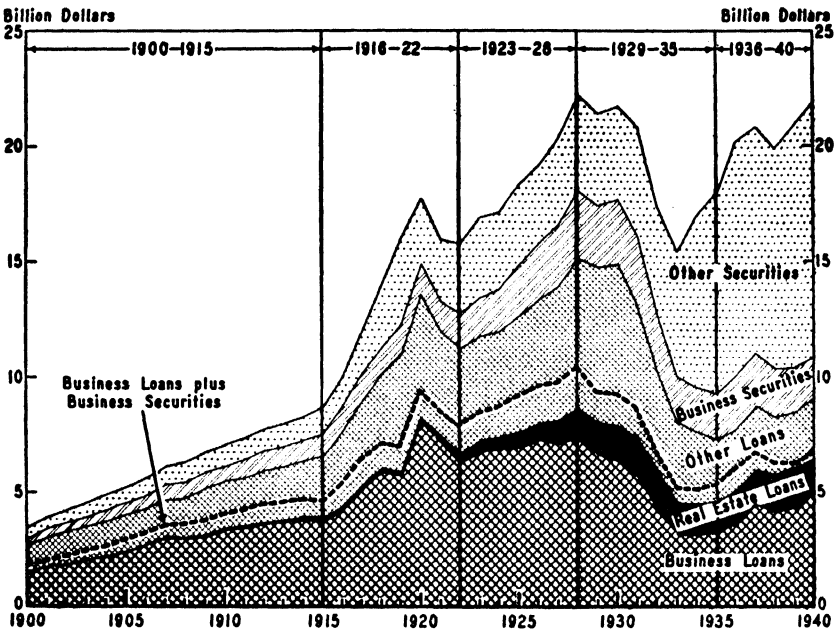
POSITION OF THE COMMERCIAL BANK AS A BUSINESS FINANCING INSTITUTION

In order to study changes in the functional position of the commercial banking system since 1900, it is convenient to divide bank assets into the broad categories of "business" loans (including loans to financial enterprises other than banks), loans secured by real estate, other loans (including agricultural loans and loans secured by stock exchange collateral), "business" securities, and other securities. A further breakdown which would separate out loans on stock exchange collateral, consumer loans, term loans, and various types of investment securities would be useful, but the principal purposes of this study are satisfied by the broad categories indicated. The data presented in Charts 21 and 22 cover national banks only — an unavoidable limitation since this is the only group of banks for which satisfactory estimates of this distribution of assets for earlier years can be made. Nonetheless these data may be taken as fairly representative of the commercial banking system as a whole.

The history of structural change between 1900 and 1940 in the assets of commercial banks falls naturally into five fairly distinct periods: 1900–1915, 1916–22, 1923–28, 1929–35, and 1936–40. From 1900 to 1915 nearly all types of bank assets grew at about the same rate which, considering the length of the period, reflects a remarkable stability in the functional position of the banking system.[14]

[14] The increase in total assets of national banks during this period amounted to about $450 million, annually, or an average rate of 6 percent per year. The average rate of increase for business loans also was about 6 percent, and the volume expanded on the average by about $150 million, annually. When holdings of business securities are added to business loans, the average annual increase of this combined series is found to be $190 million, or an average annual rate of about 7 percent. The average annual rate of growth for these series, as estimated here, is based on the assumption that the series increased at a constant rate each year.

Chart 21 — LOAN AND INVESTMENT ASSETS OF NATIONAL BANKS, 1900–1940

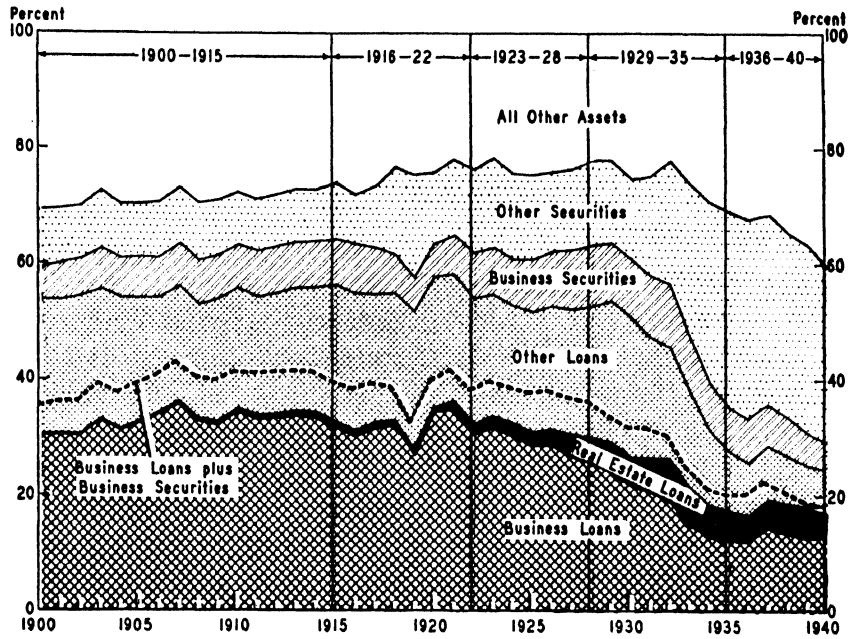


Changes after 1900 in the earning assets of national banks fall into five distinct periods. In the first three periods business loans plus bank investments in private corporate securities rose almost continuously; it was not until after 1929 that a sharp decline occurred.

In the period 1916–22, seven years of war and postwar readjustment, nearly all bank assets shared alike in expansion and contraction; during 1920, however, business loans made by banks expanded somewhat more than assets as a whole.[15] As revealed in the preceding analysis the changes in corporate financial structure which took place during the entire period — particularly those changes that represented the impact on credit demands of rising commodity

[15] Over the entire seven-year period the annual increase for total assets of national banks averaged $1,270 million; that for loans to business, $370 million; and that for loans to business plus holdings of business securities, $460 million. In each case the average dollar increase represented an average annual rate of growth of about 8 percent.

Chart 22 — Loan and Investment Assets of National Banks in Percent of Total Assets, 1900–1940



During the twenties, bank holdings of business securities rose relative to other assets, but not enough to offset the relative decline of bank loans to business.

prices and inventory values — were such as to increase demands for short-term relative to long-term financing. But while the asset structure of banks underwent fairly substantial changes within this period, the structure at the end was very much like that which had prevailed at the outset.

Significant changes set in, however, during the period 1923–28. Despite the fact that the average annual rate of total asset growth of national banks was almost equal to the 1900–1915 rate (5 percent annually, compared with 6 percent in the earlier period), the rate of growth of loans to business (2 percent) was considerably less than in the earlier years. It is this structural change in bank assets which is frequently referred to as the "decline" of the commercial

loan. The decline, however, was merely a loss of relative position by the "business" loan, and was attributable entirely to the greater growth of certain other commercial bank lending functions, namely, loans secured by real estate and by stock exchange collateral, and heavier investment in corporate securities.

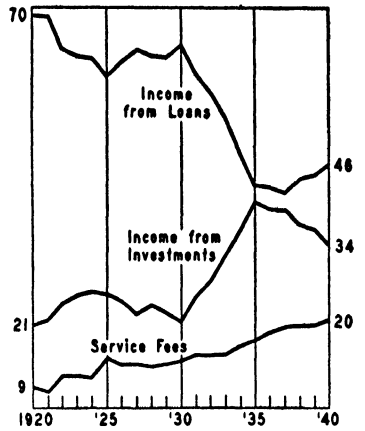
The tendency for bank holdings of business securities to increase during the years 1923–28 is especially noteworthy. When these assets are added to bank loans to business, the total is found to have increased at an average annual rate of 5 percent, which is not far below the average rate of increase during the period 1900–1915. Since the rate of growth for this combined series in the period 1923–28 was the same as that for total bank assets, its relative position among bank assets at the end of the period differed little from that at the beginning. This stability, however, veiled a significant change in the way in which banks met their continuing business financing function. During the period, the function was met increasingly through the purchase and holding of private corporate securities and the extension of credit on the security of stock exchange collateral and real estate mortgages and, relatively speaking, decreasingly through the extension of business loans of traditional form. Again, this behavior of bank assets reflects shifts during those years in corporate asset structure and financial policy. As reviewed above, all these changes seemed to conspire against the growth of short-term credit and to promote the more extensive use of medium- and long-term funds, in the form of debt or equity.

In the years 1929–35 business loans and private corporate securities declined more than total bank assets, and in 1936–40 they failed to recover at as fast a rate and as persistently as total bank assets. The result is that, while the relative importance among commercial bank assets of business loans and business securities, combined, did not differ markedly in 1928 from what it was in 1900 (37 percent of total assets in 1928 compared with 36 percent in 1900), in 1940 it had fallen to but 18 percent of total bank assets. It is useful, nevertheless, to distinguish between the periods 1929–35 and 1936–40, because in the latter period the absolute amount of bank loans to business was increasing, in sharp contrast to the years 1929–35 when liquidation by the business economy of its indebtedness to banks was almost uninterrupted.

Possibly a more effective measure of the changing stake of the

commercial banking system in the business credit market would be provided by data on the income derived by banks from various types of assets. Such an analysis is impossible, however, since in distinguishing between income from loans, investments, and fees a further distinction cannot be made between income earned on funds and services extended to business enterprises for business purposes and income earned from other sources, e.g., from consumer loans, government securities, and the like. In general, the outstanding facts about the data, as shown in Chart 23, are, first, that the relative importance of income from loans and that from investments remained practically stable until 1930; second, that between 1931 and 1935 the former lost ground to the latter in a spectacular fashion; and, third, that this shift in the relative importance of income sources was checked and even reversed slightly in the last of the periods which we have selected for our analysis of bank assets, namely, 1936–40.

Chart 23 — GROSS INCOME OF NATIONAL BANKS, BY SOURCES, 1920–40
(*in percent of total*)



The years 1931–35 witnessed a rise in the importance of investments and a decline in the importance of loans as sources of bank income. Income from services tended persistently to rise after 1920.

Chapter 4

CHANGES FROM 1900 TO 1940 IN THE INSTITUTIONS SUPPLYING BUSINESS CREDIT

AFTER THE EARLY TWENTIES the institutional organization of the business credit market underwent significant changes, and these changes were greatly accelerated during the thirties. First, new private lending agencies developed, and their activities and operations influenced established agencies of business financing. Second, relationships between established agencies were realigned and readjusted with functional differences tending to become increasingly blurred. Third, a number of public business financing agencies emerged to supplement the facilities offered by private financial enterprise.

RISE OF NEW PRIVATE LENDING AGENCIES

Consumer Credit Agencies

One of the major developments on the supply side of the business credit market was the growth of consumer credit agencies — personal finance and industrial banking companies, credit unions, and sales finance companies. This growth was especially rapid during the 1920's, paralleling the growth of the consumer durable goods industries.

The personal finance company, which is the oldest — at least in terms of its antecedents — of the consumer credit agencies, grew rapidly from not more than 500 offices with outstandings of less than $25 million in 1920 to 4,000 offices with outstandings of $577 million in 1940. The industrial banking company made its appearance in this country in 1910, and by 1940 had expanded to between 400 and 500 companies with outstandings estimated at $288 million. The first credit union was organized in 1909 and by 1940 there were nearly 9,000 in operation with outstanding loan balances

of $190 million. Most of the sales finance companies were organized after World War I, although some of the largest were started just before the war and even before 1900. By 1940 their number totaled over 1,000, and they held among their assets retail instalment paper of nearly $1.5 billion.[1]

Numerous factors lay behind the growth of consumer cash lending agencies, but two were fundamental. First, the urbanization and industrialization of the country made most individuals entirely dependent on a flow of *cash* income. Interruptions in this flow, or a sharp increase in consumer outlay, could quickly produce a need for borrowing whereas in a rural, agricultural society interruptions in income came mainly from crop failures, and even in those cases individuals would not be cut off entirely from a means of subsistence. Second, cash lending was encouraged by the wider use of goods and services of high unit value, many of which are considered as "essentials" to the American standard of living, and nearly all of which require the expenditure of amounts that are substantial in relation to current income.

Commercial banks in general were content until the early 1930's to serve as wholesalers of credit in this field rather than as retailers, for many reasons: newness of the credit area; inexperience in handling credits of the type involved; the necessity of conducting consumer instalment lending within a range of permissible charges designed primarily for business lending; doubt as to their ability to acquire locally a volume of business sufficient to carry overhead costs; unreadiness to conduct the promotional work essential to the acquisition of needed volume; the relative attractiveness of alternative uses of bank funds. The new agencies, in contrast, were favored by many conditions, not the least being the right to organize nationally and laws that exempted them from usury statutes and permitted higher rates on loans of small amount.

The primary reason for the growth of consumer instalment sales credit was that mass production, a necessary condition of low pro-

[1] More detailed historical discussions of these consumer credit agencies may be found in studies of the Financial Research Program of the National Bureau of Economic Research: *Personal Finance Companies and Their Credit Practices*, by Ralph A. Young and Associates (1940); *Sales Finance Companies and Their Credit Practices*, by Wilbur C. Plummer and Ralph A. Young (1940); *Industrial Banking Companies and Their Credit Practices*, by Raymond J. Saulnier (1940); and *The Business of Consumer Instalment Financing*, by Ralph A. Young (unpublished).

duction cost and low price, was contingent on mass consumption which, in turn, was impossible, or at least would not have occurred so soon, without liberal deferred payment terms. For various reasons, dealers and manufacturers failed to satisfy this credit demand directly: dealers were generally unable to assume the burden of carrying customer receivables, and manufacturers were unwilling to accept this burden because it was a function alien to their management capacities and because they had other financing burdens of considerable weight. In those cases where manufacturers undertook to carry the receivables of their dealer customers, they usually did so through separate corporations with specialized management and segregated capital.

In supplying consumer credit, assistance from some financial agency clearly was necessary. Among the established agencies the commercial bank was the most likely credit source, but until the early 1930's the part it played was primarily that of supplementing the equity capital of the new agencies with loan funds. It did not assume a direct financing role for several reasons: the business presented many new risk factors, not the least of which was the financing of dealers who carried relatively heavy inventories and whose financial position was relatively weak; the limitations on bank rates of charge to customers, imposed by law and convention, made it difficult to cover the costs of loan administration which were necessarily high because of the measures needed to limit risk, the small average size of individual credits, and the monthly payment features; operations were likely to be unprofitable unless individual banks could get a volume of business larger than seemed possible within the local markets to which they were limited by law; and, finally, other demands for bank funds were more attractive to the banks.

Sales finance companies, in contrast, were free from all these limitations. At the beginning of their development the funds they used were somewhat more expensive than those acquired by banks through public deposit. Their activities, however, were less affected by legal restraints and limitations of corporate powers; their management was prepared to experiment with new credit extension techniques; their freedom to organize national "branch financing" systems gave them many competitive advantages; their use of a wide margin of equity capital and the fact that they were not subject

to bank examination were strongly conducive to risk-taking; and finally, while their operating costs were high, they were free from legal limits on customer charges and, in many cases, received substantial subsidies from manufacturers.

Commercial Finance Companies[2]

Another important development in the business credit market was the rise of the commercial finance company, which in many respects merges into the sales finance company; in fact, the two agencies are frequently combined in one general "finance company." In this study a "commercial finance company" is defined as an agency without a bank charter which performs one or more of the following functions: advances funds to business concerns by discounting accounts receivable, usually without notice to the trade debtor; makes loans secured by chattel mortgages on machinery or liens on inventory; and finances deferred payment sales of commercial and industrial equipment.

The first type of lending, non-notification accounts receivable financing, originated even before automobile financing; a company was chartered for this purpose in Chicago in 1905. By 1940 commercial finance companies ranged all the way from small concerns specializing in either non-notification financing of accounts receivable or the instalment financing of income-producing equipment for small businesses, or in some combination of these two functions, to companies with nearly a billion dollars of assets, conducting a broadly diversified program of business and consumer financing.

Like consumer credit agencies, the development of commercial finance companies was encouraged by a combination of circumstances. The principal basis of the demand for their equipment financing services is found in the rapid progress of technology. Better and more economical equipment for commercial and industrial establishments was introduced, and competitive conditions compelled all concerns, even those with modest financial resources, to install it or lose their positions in the market. The acquisition of this equipment presented no special financial problem for most

[2] For more detailed discussion see Raymond J. Saulnier and Neil H. Jacoby, *Financing Equipment for Commercial and Industrial Enterprise* and *Accounts Receivable Financing* (both studies of National Bureau of Economic Research, Financial Research Program).

large concerns, but such purchases proved burdensome for many small and medium-sized companies, especially in the trade and service industries where the vast majority of concerns are relatively undercapitalized. For enterprises in this group the new equipment which was essential to efficient technical operation could be acquired only on a deferred payment basis, designed to enable the buyer to amortize the debt out of income earned as the equipment was used. In satisfying this demand for credit the commercial finance company, like the sales finance company, had certain definite advantages. Its legal position permitted it to operate as a national "branch financing" organization, which was particularly important in soliciting the instalment paper generated through the sales of a manufacturer producing for a national market, and it was free of limitations under which it would have operated had it been organized as a bank. In general, the commercial bank kept out of the field of equipment financing, except as a lender to the finance company; and manufacturers and dealers chose to discount their receivables with finance companies for much the same reasons as those cited in the discussion of consumer sales financing above.

A second focus of interest for the new private financing agencies was the purchase of open accounts receivable. Commercial finance companies began buying the open accounts of small and medium-sized concerns before World War I, but the principal development took place during the thirties. Perhaps the basic factors accounting for the increase in the thirties were that many small and medium-sized concerns suffered an erosion of working capital during those years, as a result of successive years of operating losses, and that new and growing concerns found it difficult to obtain adequate financing in view of the general uncertainty regarding economic conditions. For both types of concerns the techniques of receivables financing often offered the most favorable basis on which they could obtain needed funds; and they naturally would look for financing facilities to an agency prepared to take higher than average risks, and to make loans on the basis of specially designed security devices.

Several considerations favored commercial finance companies in the development of this credit area. In the first place, the new agencies had complete freedom to introduce the somewhat novel and highly specialized credit extension techniques essential to success in such lending operations. Second, the regional or national

coverage of the companies enabled them more easily to acquire the volume of business necessary to cover overhead expenses and to provide the needed diversification of risks. Third, state laws, such as those relating to the taking of assignments of accounts receivable on a non-notification basis, were much more favorable to the operations of commercial finance companies than to those of commercial banks. Fourth, finance companies were able to charge rates commensurate with the administrative costs and risk factors peculiar to this credit area, whereas if they had been organized as banks they would have been limited to much lower levels of customer charges. Finally, they were better placed to undertake high-risk financing because of their substantial equity positions, and their freedom from responsibility for depositors' funds and from the bank examination which performance of the deposit function entails.

Effects of the Rise of New Private Lending Agencies on the Business Credit Market

The relation between consumer credit agencies and the business credit market is indirect, yet the growth of these agencies had important effects on that market and especially on the position within it of the commercial bank. First, through these agencies credit was extended in increasing amounts into the consumption process, thereby enabling producers and distributors to sell for cash. As a result sellers did not need to carry a large amount of consumer receivables, a condition that is closely related to the demand for short-term business credit, since a low ratio of receivables to sales is usually associated with a low ratio of notes payable to sales and to total assets.[8]

Second, the way in which consumer credit agencies financed themselves influenced the business credit market. In 1940 sales finance companies used equity funds to finance about 25 percent of their total assets, and short-term borrowings were used to finance between 60 and 70 percent. For personal finance companies equity funds

[8] For example, the automobile industry has one of the lowest ratios of receivables to sales, and its ratio of notes payable to sales is among the lowest of all industrial divisions. See Walter A. Chudson, *The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937* (National Bureau of Economic Research, Financial Research Program, 1945) Chart 4, p. 42 and Chart 5, p. 51.

provided about 60 percent of the financing needs, and notes payable supplied the remainder, except for national companies which used some long-term debt in 1940. In general, the use of equity funds in consumer instalment financing would be expected to have a restrictive effect on the total demand for bank credit, whereas the use of bank borrowings would alter the industrial composition of such demand. That institutional developments after the early 1920's produced this latter effect is revealed by the changes in the relative importance, as users of bank credit, of intermediary finance agencies and manufacturing companies, referred to in Chapter 3.

Direct participation by commercial banks in the field of consumer instalment financing exerted a contractive influence on business demand for bank credit. The extension of credit into the economic system through such a channel may restrict to some degree the demands for business credit arising from other segments of the economy, subject, of course, to the qualification that any given extension of funds, if it is expansive in regard to total economic activity, need not on balance contract the demand for funds by other lines.

Until the early 1930's the finance companies in both the consumer instalment credit and the business financing markets conducted their business with little direct bank competition. Indeed, the finance company worked side-by-side with the commercial bank, each doing a type of business for which it was especially designed and qualified. The newer concerns became specialized "retailers" of credit, depending on the banks and on their own equity resources for the funds which they needed, while the commercial banks acted as "wholesalers."

This situation changed markedly during the early 1930's. By that time business loans of commercial banks had decreased sharply; bank earnings had declined, partly because of changes in the character of bank assets and partly because of declining yields on high-grade loans and investments. The interest of the banks in new types of lending was stimulated by the fact that banks had had an opportunity to observe the successful operation of finance companies; also, successful and profitable experience with Federal Housing Administration insured loans had made a significant impression on bankers' views as to the soundness of the instalment payment method. As the techniques appropriate to the new types of lending

became more widely known, better tested, and more or less conventionalized, many of the barriers that had once kept the banks from direct participation were removed. By 1940 they had acquired a fairly substantial interest in the instalment financing of income-producing equipment and in lending on the security of assigned accounts receivable; in fact, in 1940 the banks surpassed the commercial finance companies in the volume of business done in these fields.

Tendencies in Inter-Agency Competition

A statement of institutional developments on the supply side of the business credit market would be incomplete if note were not taken of the fact that the newer business lending agencies showed an increasing tendency to extend credit in areas customarily served exclusively by commercial banks, just as commercial banks tended, much more extensively it should be observed, to do a "finance company" type of business. As a result, functional distinctions became blurred and in some instances almost completely disappeared. This tendency toward mutual penetration of market areas was most pronounced in the relationships between commercial banks, industrial banking companies, and commercial finance companies; it was present, but less markedly so, in the relations between personal finance companies and commercial banks.

Commercial banks and commercial finance companies came closer together, in part because the commercial finance companies broadened their functional basis to include such activities as term loans, made on a pattern similar to that followed by commercial banks, and in part because of the widening of commercial bank activities. The institutional adjustments involved an extension into areas of larger-size loans and higher quality credits by the finance companies and industrial banking companies, and greater activity in the field of smaller business loans and higher risks on the part of commercial banks. This process of institutional adjustment also affected the personal finance and sales finance companies, the former through a tendency to increase the portion of loans made to small proprietors, the latter through a tendency to undertake commercial finance company functions. Each type of agency had, of course, a market in which competition from other agencies was relatively insignificant, but increasingly these areas tended to narrow while the areas of inter-agency competition tended to widen.

RELATIONSHIPS BETWEEN OLDER PRIVATE BUSINESS FINANCING AGENCIES AND COMMERCIAL BANKS

While certain adaptations in bank lending policies can be traced to the rise of new private agencies in the fields of consumer and business financing, others grew out of changes in banks' relations with established business financing institutions — such as life insurance companies, investment banks, and factoring companies.

Life Insurance Companies

Until the early 1930's there was little direct competition between commercial banks and life insurance companies in the field of business lending. Such competitive connections as did exist were limited to life insurance company holdings of corporate bonds and to their relatively insignificant holdings of mortgage loans secured by industrial properties. In 1933, however, and more definitely in 1934, the two agencies tended to come closer together in those functional aspects most closely related to business financing.

This tendency was due to several developments. First, the growing participation of commercial banks in the term loan market increased considerably the average maturity of business loan assets of banks and brought them closer in character to the medium-term, if not to the long-term, investments of insurance companies.[4]

Second, direct financing of businesses by insurance companies was increased through their purchases of privately placed debt securities, especially those of medium term, and by an expanding program of direct loans to industry secured by mortgages on plant and equipment. In many cases there is actually little difference in economic character and effect between the private purchase by an insurance company of an issue of medium-term securities to be amortized on an instalment payment or serial basis, and the extension of business credit by a commercial bank under a term loan agreement. The similarity between industrial mortgage financing by insurance companies and term lending by commercial banks also is great. In this type of financing the insurance company takes a

[4] For a discussion of the development of term lending by commercial banks see Chapter 5, pp. 139–42.

mortgage on the industrial plant as security, but the credit is weighed with less regard to real property values than to the insurance company's estimate of the ability of the borrower to repay the loan in instalments out of the proceeds of business operations. The basis of the loan is exactly the same as that underlying the term loan, with the exception that the industrial mortgage may have a somewhat longer maturity.

Industrial mortgage financing by insurance companies was only beginning in 1940–41; at that time one large life insurance company and two others of smaller size were actively interested in developing such loans and had organized special departments for this purpose. Although the volume of credit extended was not large, it attracted considerable attention since it indicated a trend in insurance company loan policy which might be continued. In any event the practice supplements insurance company acquisitions of private placements of medium-term securities as a development in loan policy which brings the insurance company into closer functional relationship with the commercial bank.

These adaptations in life insurance company investment policies reflected, basically, a vast increase in the resources for which the companies had to find investment, as a greater portion of the savings of the community was channeled into use through the medium of these institutions. Another influence was the tendency, which began in 1934, for a larger proportion of corporate debt issues to be placed privately with institutional investors.

A third influential factor is that commercial banks tended to make increasing amounts of loans on the security of life insurance policies, much along the lines of the "policy loans" that had been made for years by life insurance companies themselves. The relative importance of policy loans and premium notes among life insurance company assets, as well as their absolute amount, declined regularly after 1933; this development can be attributed in part to the increased activity of commercial banks, but more to improved economic conditions, which tended to lessen the demand for loans of this kind, and to the increasing availability, at declining costs, of credit for personal needs through a widening range of consumer credit agencies. In 1933 policy loans and premium notes, amounting to nearly $3.5 billion, comprised 17.8 percent of the total assets of 49 legal reserve companies holding over 90 percent of the assets of

all companies. At the end of 1940 these life insurance companies held approximately $2.8 billion, or approximately 10 percent of their total admitted assets, in policy loans and premium notes. No estimates have been made of the volume of life insurance policy loans held by commercial banks although it is reasonably certain that they amounted to a negligible sum before 1935. However, as a rough estimate, the liberal assumption that policy loans held by banks at the end of 1940 equaled 10 percent of their personal loans outstanding at that time would place commercial bank holdings at but 2 percent of those of insurance companies.[5] Therefore it is impossible to conclude that commercial banks played a significant investment role in this field; their competitive influence was felt primarily through their offering loans at rates below the 6 percent rate customarily charged by insurance companies, and through their satisfying in part, by their personal loan services, the type of credit demand met by the policy loan. More extensive direct participation by banks in the policy loan field was restricted by a number of conditions, including the relatively high administrative costs of lending on this basis.

Along with these evidences of competitive relationships, commercial banks and insurance companies showed tendencies to engage more extensively in cooperative financing arrangements. Such arrangements may provide, for example, that out of a given issue of securities a bank or group of banks will take those that have the short- and medium-term maturities, and one or more insurance companies will take the longer-term portion. Because of the short-term nature of bank deposit liabilities and the long-term and more stable liabilities of the insurance companies, this cooperative sharing of credit extensions is mutually advantageous.

Factoring Companies[6]

For many years factoring companies played a unique role in the financial system of this country. By the mid-1930's, however, the

[5] Total personal loan outstandings of commercial banks at the end of 1940 amounted to $586 million (*Federal Reserve Bulletin*, June 1944, p. 606).

[6] For a discussion of the history of factoring companies and their 1940 status, see *Accounts Receivable Financing*, *op. cit.*, pp. 18–20, 39–47. See also Chapter 5, pp. 142–44, below.

uniqueness of their position tended to be lost, although it had by no means disappeared. This came about for two reasons: other agencies offered services similar to those customarily associated with the factoring business, and the factors themselves made certain adjustments which brought them to a closer functional similarity with the commercial banks and the commercial finance companies.

While evidences of changing relationships among financing agencies in this area are numerous, a few developments are outstanding. First, after limiting their activities to the textile industry for nearly a hundred years, factoring companies in the 1930's began to finance other industries; some companies went into non-textile fields to purchase open accounts with full, or with only partial, assumption of risk. Second, some commercial finance companies, which were originated to finance open accounts receivable on a non-notification basis and without assumption of risk, began to offer a factoring service quite like that of the "old-line" factor, most frequently for clients outside the textile industry. Third, after 1935 or thereabouts commercial banks developed non-notification financing of accounts receivable on an increasing scale and, to a lesser extent, a few banks undertook regular factoring functions for textile and other mills. In summary, the tendency was for all three types of agencies — factors, commercial finance companies, and commercial banks — to become more alike functionally, although each agency still retained a functional position which was in most respects unique.

EMERGENCE OF PUBLIC BUSINESS FINANCING AGENCIES

Before World War II various government agencies had come to play important roles in the business credit area. For the most part these agencies came into existence in the early thirties when the protracted depression affected both business needs for funds and the abilities of established private agencies to meet those needs.

The activities of public business financing agencies were of two general types: (1) direct lending, in which the public agency extended credit to a business concern, and (2) loan guaranteeing and financing undertaken cooperatively with private agencies.

Reconstruction Finance Corporation

The Reconstruction Finance Corporation was established by Act of Congress in 1932, to check the deflationary tendencies then current in the economy; it was empowered to make loans or advances to "any bank, savings bank, trust company, building and loan association, insurance company, mortgage loan company, credit union, Federal land bank, joint-stock land bank, Federal intermediate credit bank, agricultural credit corporation, or live-stock credit corporation . . ."[7] In the same year the Emergency Relief and Construction Act extended these powers to include the right to make loans for the promotion of public housing and slum clearance, for low-income housing activities, and for the financing of certain types of public works.[8] The direct business lending activities of the agency did not begin until 1934 when the agency was empowered to make loans directly to industry, or in cooperation with banks or other lending institutions, whenever it appeared that the employment of labor would thereby be maintained or increased; loans were to be adequately secured, they were to be made only to "established" businesses and solvent borrowers, and were not to exceed $300 million in aggregate, or $500 thousand in individual, amount.[9]

The business lending powers were granted for a number of reasons. First, it was believed that the RFC could fill gaps in local financial facilities caused by bank failures and by the generally tightened conditions of the business credit market; in fact, the legislation restricted RFC activities to making loans only ". . . when credit, at prevailing bank rates for the character of loans applied for, is not otherwise available . . ."[10] Second, it was thought that direct loans by the RFC might be required where operating losses had so depleted the working capital of business concerns that they were unacceptable credit risks for private financing agencies.

The business lending activities of the RFC increased fairly

[7] Reconstruction Finance Corporation Act, *Federal Reserve Bulletin*, February 1932, p. 95.

[8] Emergency Relief and Construction Act of 1932, *Federal Reserve Bulletin*, August 1932, pp. 520–27.

[9] An Act relating to direct loans for industrial purposes by Federal Reserve banks and for other purposes, *Federal Reserve Bulletin*, July 1934, p. 432.

[10] The Reconstruction Finance Corporation Act as amended, Section 5 (d) (United States Congress Supp. VII, Title 15, Ch. 14).

steadily; outstandings of direct loans to commercial and industrial enterprises rose from approximately $6.2 million at the end of 1934 to $112 million at the end of 1940 (exclusive of loans to aid in national defense). Since RFC loans to business were made predominantly on a term basis, their relative importance can be judged best by comparing them with the term loans of commercial banks; at the end of 1940 RFC industrial loan outstandings equaled nearly 6 percent of commercial bank term loans.

The second of the business lending activities of the RFC, namely, making commitments to take up loans made by private lending agencies when and if the latter wished to turn over all or part of the loan, and taking participations in loans made in part by private agencies, also grew in the period 1934–40. As of the end of 1940 the RFC had participations in outstanding loans amounting to nearly $6.3 million and outstanding agreements to purchase participations of nearly $3 million. It will be noted that this activity was complementary rather than competitive as regards the interests of private agencies in the business credit market.

The development of this cooperative lending, which was designed to support and supplement private institutions in the credit market, is of interest for two reasons. First, it tended to maintain rather than change the institutional structure of the market and, second, it exerted a direct influence on the operating policies of private agencies. The latter resulted from the fact that commitments were made or participations taken by the RFC or other public lending agencies only when the private lending agency associated with the transaction extended the credit on terms that conformed to standards laid down by the public body. These standards usually pertained to rates of interest, maturity, and repayment terms.

Federal Reserve Banks

The original purpose of the Federal Reserve banks, namely, that they should serve as "bankers' banks" and that it was not their function to make direct loans to industry, commerce, and agriculture, was sustained without exception until 1934, when the Federal Reserve Act was amended to initiate a program of direct lending to commercial and industrial enterprises. The reasons for the initiation of the program were the same as those that led to the expansion of

RFC powers; indeed, both agencies were granted additional powers in the same Act of Congress. The amendment to the Act empowered the Federal Reserve banks "In exceptional circumstances, when it appears to the satisfaction of a Federal Reserve bank that an established industrial or commercial business located in its district is unable to obtain requisite financial assistance on a reasonable basis from the usual sources . . . [to] . . . make loans to, or purchase obligations of, such business, or [to] make commitments with respect thereto, on a reasonable and sound basis, for the purpose of providing it with working capital, but [that] no obligation shall be acquired or commitment made . . . with a maturity exceeding five years."[11] The limitations to working capital loans and to loans of maturities not over five years, it will be noted, were restrictions on the lending powers of the Federal Reserve banks which were not imposed on the RFC. The reserve banks were also empowered to make credit available indirectly through banks and other financial institutions by discounting for, or purchasing from, those agencies obligations originating in the extension of credit to businesses and made on the same terms that were applicable to direct loans. These "take-out" arrangements could be entered into provided the private financing agency obligated itself to absorb at least 20 percent of the loss that might arise from such loans. The reserve banks were also empowered to participate in loans where the private financing agency was taking 20 percent or more of a credit extended and assuming an obligation for loss on a proportionate basis.

The industrial advance program, however, never assumed very large proportions, even when compared with the relatively modest program of the RFC. Its high point was reached at the end of 1935 when industrial loan outstandings of the Federal Reserve banks amounted to $32.5 million; by the close of 1940 they had fallen to $9.2 million. A similarly minor role was played by the Federal Reserve banks in their loan participation and commitment program; at the end of 1940 they had $5.2 million of commitments and $6.4 million of participations outstanding. Thus, more than in the case of the RFC, a major effect of the Federal Reserve bank program on the business credit market was exerted through supplementary or cooperative credit activities. Like the RFC activity, this program

[11] An Act relating to direct loans for industrial purposes by the Federal Reserve banks, and for other purposes, *Federal Reserve Bulletin*, July 1934, pp. 430–34.

expedited certain adaptations in the lending policies of private financial agencies.

United States Maritime Commission

After 1936, when the United States Maritime Commission was formed and took over about $100 million of ship construction loans and ship sales notes from the United States Shipping Board Fleet Corporation, public lending activity in this field declined sharply. At the end of 1940 ship construction loans of the Commission amounted to $36 million, nearly all of which had been made by the Shipping Board.

The Maritime Commission made little use of its power to extend insurance on ship mortgage loans made by private financial agencies, where the ship financed and the terms of the loan met certain standards laid down in the enabling legislation. On October 1, 1940 there were only four approved applications outstanding, amounting to $1.3 million, on which the Commission had either extended insurance or had committed itself to do so.

Export-Import Bank of Washington

The Export-Import Bank of Washington was created in 1934 by Executive Order, and was continued until January 22, 1947 by an Act approved January 31, 1935, subsequently amended.[12] After a series of increases the lending authority of the Bank was set, as of September 26, 1940, at $700 million.

The usual function of the Bank, which was organized with the single original objective of facilitating trade between the United States and Soviet Russia, was to finance export trade in agricultural and industrial products. In this connection it made direct loans to exporters, and it financed exports indirectly through loans to foreign governments and to their central banks. Also, it purchased and sold participations with private banks. The Bank's powers were extended in 1940 to cover loans to governments, central banks, or acceptable banking institutions and, where guaranteed by the same, to

[12] The Export-Import Bank of Washington was made a continuing independent agency of the government by the Export-Import Bank Act of 1945. Since the present discussion is concerned only with developments through 1940, the expansion of lending authority under the 1945 Act is not discussed here. The text of the Act and a general policy statement of the Bank may be found in the *Federal Reserve Bulletin*, August 1945, pp. 767–69 and October 1945, pp. 1000–1005.

any political subdivision, agency, or national, where the purpose was to assist "in the development of the resources, the stabilization of the economies, and the orderly marketing of the products of the countries of the Western Hemisphere."

From its organization in 1934 through 1940 the Bank, including the Second Export-Import Bank which was organized in 1934 and liquidated in 1936, made loan commitments of about $655 million of which $150 million were canceled. Disbursements amounted to $210 million. Repayments brought the sum outstanding on December 31, 1940 to $131 million, of which $83 million were the Bank's own loans and discounts, and $48 million were acceptances of other banks underwritten by the Export-Import Bank.

RELATIONS BETWEEN PUBLIC AND PRIVATE BUSINESS LENDING AGENCIES

As indicated in the foregoing sections, by the end of 1940 public and private business financing agencies had relationships in the business credit market which were complementary and cooperative as well as possibly competitive. Consequently, the effects of public lending agencies on the business credit market, and on private agencies serving that market, were of different kinds. Quantitative expression can be given to these effects in some instances, but certain of them, such as changes induced in the business lending policies of private institutions, can be described only qualitatively.

At the end of 1940 loans to business by public agencies probably amounted to less than $200 million. This includes all direct loans to industry and commerce made by the Reconstruction Finance Corporation and the Federal Reserve banks and one-half of the loans and discounts of the Maritime Commission and the Export-Import Bank; the latter rough adjustment has been made since most all of the Maritime Commission's loans were carried over from an earlier experiment and because the Export-Import loans were partly to public bodies. The portion of the business credit market served by public agencies at that time can be estimated as about 3 percent of the "commercial and industrial loans" of all commercial banks. But since most public agency loans to business were of intermediate term, a comparison with commercial bank term loans may be relevant: the outstanding loans of public agencies equaled nearly 10 percent of the term loans of commercial banks at the end of 1940.

A sharper comparison can be drawn, however. There is no question that the average size of public agency business borrowers was smaller than that of borrowers from private agencies; but the credit standing of the former can only be inferred from certain characteristics of the loans made by public agencies, which are suggestive of relatively high risks — such as greater dependence on security devices, loss experience, and the like — and the statutory mandate under which the financing activities were conducted. An indication of loss experience is that the RFC stated in 1940 that it anticipated a loss of 10 percent on its then outstanding loan volume, while the Federal Reserve banks expected that the interest income from their industrial advances would be sufficient only to cover their administrative costs. In so far as loans of this type would not be made by commercial banks, it may be concluded that the public agencies operated until 1940 in a segment of the business credit market where they were least likely to compete with commercial banks. In some respects the competitive effect was probably felt more directly by commercial finance companies, since their activities were more nearly confined to that section of the business credit market which was also served by public agencies.

These are over-all measures of loan quality, however, and within the totals there doubtless was a margin that was a proper sphere of activity for private agencies. In any case, public agencies served that segment of the business credit market which was made up of small and medium-sized concerns — the segment that produced the majority of bank borrowing customers and in which banks made the bulk of their loans. These facts, and also the fact that commercial banks by 1940 were making an increasing proportion of their term loans to medium-sized concerns, suggest that the degree of competition between the two sets of agencies was increasing.

On the other hand, the entry of public agencies into the business credit market had certain expansive effects on loan volume and certain modernizing effects on bank lending policies and practices. These were produced in two ways: first, through the activity of public agencies in taking participations in loans made by private agencies, as remarked on above. The amounts of these participations and commitments to take participations were not great; the RFC and the Federal Reserve banks had but $20.9 million outstanding at the end of 1940. However, the net effect of these supporting activities was somewhat greater than indicated by their outstandings,

since the private credit supported was a multiple of the amount of such participations and commitments outstanding, determined by the percentage of the latter to the total credit extended jointly.

Second, the interest of commercial banks in newer types of business lending techniques, for use especially among concerns that are small and relatively unattractive as credit risks, may be attributed in part to experimentation with them by public lending agencies. In this credit area the public agencies had to experiment not only with the term loan technique but also with new types of security devices, such as the trust receipt and the assignment of accounts receivable, etc. In this sense they facilitated adaptations of certain credit extension methods useful to private agencies. To select an example from another credit area, it has been found that the interest of commercial banks in consumer instalment credit — and doubtless also in the instalment financing of business purchases of machinery and equipment — was stimulated by their successful and profitable experience with home modernization loans insured by the Federal Housing Administration, and by their observation of the activities of the Electric Home and Farm Authority.

It is impossible to weigh the effects of these two sets of influences, one of which was in a sense competitive and the other genuinely complementary, but it is clear that there were two aspects to the problem of relationships between public and private business financial agencies as of 1940, and that competitive relations comprised but a part of the picture.

CHANGED POSITION OF COMMERCIAL BANKS

Before a measurement of changes in the relative position of the commercial bank as a business financing agency is attempted, the changes that took place between 1930 and 1940 in the total outstanding debt, public and private (of which business debt is an element), will be traced. Shifts in the relative positions of various credit institutions did not manifest themselves prominently until after 1930, although the total amount of bank credit used by business began to fall in 1929.

The outstanding fact is that total debt at the end of 1940 ($166.5 billion) differed little from that at the close of 1930 ($174 billion). However, significant changes occurred in the composition of total

debt and in the relative importance of various institutions as creditors. The most important was the relative increase in the public debt element, which rose from 17.3 percent of total debt in 1930 to 31.8 percent in 1940. This change can be attributed almost wholly to the federal debt, since state and local debt was only slightly higher in 1940 than in 1930.

Within the area of private debt, the segment consisting of business obligations retained its relative position;[13] but at least one element, consumer debt, must have risen in relative importance since the absolute amount increased from $6.3 billion in 1930 to $8.8 billion in 1940.[14] Long-term debt rose from 64.7 percent of total private debt in 1930 to 68.1 percent in 1940, a change which is in keeping with the basic trends in corporate financial structure and policies discussed in earlier chapters.

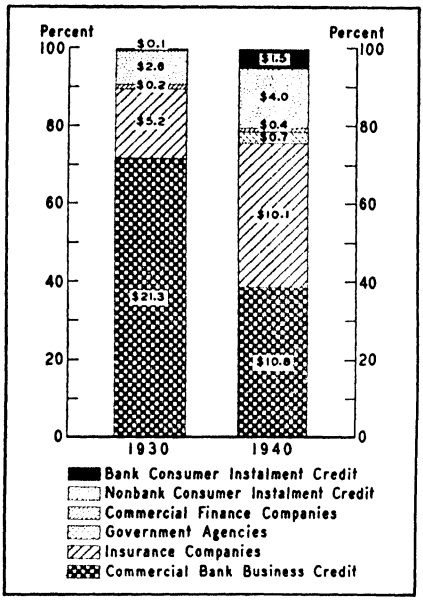
Clearly, in terms of its absolute magnitude the credit area within which commercial banks function as business lending agencies was smaller in 1940 than in 1930; their area of credit activities was wider, however, in the sense that at the end of the decade they offered a greater variety of lending services. Did changes also occur in the comparative positions of the commercial bank and other business financing agencies? In order to answer this question it is useful to combine, as in Chart 24, credit extensions of the principal business financing agencies with consumer instalment credit, since changes in the relative positions of these elements are referred to most often in discussions of the changing position of the commercial bank.

The most important change was the rise in the relative position of the insurance company as a holder of business debt. This increase, however, is not to be interpreted exclusively as a displacement of commercial bank credit, although this was true in some degree. Over the period the commercial bank holdings of corporate securities fell by $4.0 billion, while insurance company holdings rose by $4.9 billion; therefore the increase in the holdings of insurance

[13] Data on the elements of business debt have been estimated by the Financial Research Program of the National Bureau of Economic Research; the method of estimation differs from that followed by the Department of Commerce in its estimates of total private debt, but this fact is thought not to affect the findings as to relative changes in components of total debt.

[14] It should be noted that these figures are totals of instalment credit, single payment loans, charge account, and service credit outstanding, whereas the consumer credit data presented in Chart 24 are for instalment credit only.

Chart 24 — BUSINESS CREDIT AND CONSUMER INSTALMENT CREDIT EXTENDED BY PRINCIPAL FINANCING AGENCIES, 1930 AND 1940
(*dollar figures in billions*)



Major credit market changes between 1930 and 1940 were the increased relative importance of insurance companies in the extension of credit to business, and the rise in consumer instalment credit relative to business credit. While business credit extensions by government agencies and commercial finance companies increased, they remained minor elements in 1940.

companies must have come in part from holdings of the public and from new offerings.

Another important change was the rise in the ratio of consumption to production credit, a change which has been characterized above as at least partly substitutive in nature. Although commercial bank participation in the consumption credit area expanded between 1930 and 1940, the increase did not offset the decline in the banks' position within the production credit area; indeed, banks would have lost ground both absolutely and as compared with insurance companies even if they had acquired the entire net change in consumer instalment debt.

It is sometimes argued that the increase in credits extended to business by nonbank lending agencies and by public bodies contributed, through a substitutive process, to the decline of the commercial loan. While some such displacement may have taken place, it was of modest proportions. Changes in the relative importance of commercial finance companies, factors, and government lending agencies, however significant their developments may have been in certain sub-areas of the credit market, or in the organization and techniques of the business credit market, were negligible when compared with the rising importance of the insurance company and the shift from production to consumption financing.

Chapter 5

CHANGES IN THE TECHNIQUES OF SUPPLYING BUSINESS CREDIT DURING THE TWENTIETH CENTURY

THE FORTY YEARS PRECEDING World War II witnessed a number of noteworthy shifts in American business credit technology. These changes can best be understood by first gaining an understanding of the ways in which short-term and long-term credit operations were conducted around 1900.

SHORT-TERM BUSINESS CREDIT TECHNIQUE, 1900[1]

At the opening of the present century commercial banks were the predominant financial institutions supplying short-term credit to American businesses. Note brokers and commercial paper houses performed the function of middlemen in distributing among the banks the promissory notes of a limited number of medium-sized concerns, but they were satellites of the banks rather than competitors in the extension of short-term credit. Trade credit procured from business suppliers was also an important medium of short-term business financing. Because the processes of transportation and communication were slower at that time than at present, the terms of trade credit were somewhat longer and the cost somewhat higher, measured by discounts from cash prices.[2]

Commercial banking relationships with business around 1900 generally conformed to what may be termed the "classical" theory, which had evolved from British banking experience during the

[1] This section is based both on a review of the literature relating to banking and business credit practices around 1900, and on interviews with a number of individuals whose personal experiences as loan officers extend back to that time.

[2] Detailed information on trade credit around 1900 is lacking, but a reasonable assumption is that its nature and uses at that time reflected gradual developments after 1860, a period described by Roy A. Foulke in *The Sinews of American Commerce* (Dun & Bradstreet, Inc., 1941) pp. 154–57.

nineteenth century. Briefly, this theory held that bank credit to business should take the form of short-term advances to finance the production, storage, or movement of goods, the ultimate sale of which would provide funds for liquidating the loans. The majority of loans of American banks ran for 30, 60, or 90 days, although many portfolios contained obligations maturing in nine months or one year; the average maturity of outstanding business loans has been put at 60 days. The notes were usually given under an agreed upon "line of credit," arranged each year between banker and businessman, and they were frequently renewed if the need continued.

The actual uses to which businesses put the advances were significantly different from those sanctioned by "classical" theory. Short-term bank credit was used to a large extent for meeting enduring needs for working capital or for financing the acquisition of fixed assets, as well as for meeting temporary bulges in current assets. It was customary for each borrower to "clean up" all outstanding indebtedness annually, as a test of ability to achieve independence of outside sources of funds. In many instances this condition was attained by temporarily borrowing from some other lender, which merely proved the ability of the borrower to obtain bank credit from more than one source. Commercial loans would never have become an important asset of the American banking system had they been limited to genuine self-liquidating advances.

American short-term banking credits around 1900 were ordinarily based upon single-name promissory notes. In contrast, British commercial banking usually involved the discounting of two-name trade bills, drawn by the seller upon the purchaser of goods, presented to the buyer (either directly or through his bank) for his acceptance, and then discounted by the seller at his bank in order to place himself in funds for further operations. Because it tied credit extension to a particular business transaction, the trade acceptance as the legal basis for bank credit was more likely to lead to results consistent with classical commercial banking than was the promissory note.

The primary reason for the use of single-name promissory notes in American banking was the vast size and rapid development of the country. Bankers could readily learn the facts necessary to appraise the credit standing of a limited number of large wholesalers and

manufacturers, but they found it difficult to do so for a vast number of small retailers. Consequently, the name of the vending business on the credit instrument was considered sufficient, while the name of the purchasing business was believed to add little, if any, security.

In addition, business operations were extremely profitable and vendors had alternative employments for their funds which were very remunerative. Hence they were willing to offer large cash discounts for prompt payment of accounts or, what amounts to the same thing, they were able to include in the prices of their goods relatively high charges for banking accommodation. To the extent that sales were financed by extensions of trade credit, sellers were likely to borrow from banks on their own single-name promissory notes. In cases where buyers paid cash and took trade discounts, the buyers often financed their purchases by borrowing on their own single-name notes. In either case, in contrast with the trade acceptance, bank credit was injected into the commercial process on the promise of one obligor to make repayment, and without tying the credit to a particular business transaction.

The narrow use of the trade acceptance in the United States at the turn of the century was due partly to the nation's marketing structure. Around 1850 the custom was for retail merchants in the interior to make one or two journeys annually to a wholesale distribution center to purchase in large lots their requirements of merchandise, for which they paid with one or a series of drafts drawn upon them by the vendor. By the beginning of the century wholesalers and jobbers had developed corps of traveling salesmen who called upon their retail customers and took orders for goods. The transactions were relatively small in amount, and buying for cash or on open book account was far more convenient than using the more cumbersome device of the trade acceptance. The trade acceptance was inconvenient since it required as a minimum that the vendor send the draft to the purchaser and wait for its return before taking it to his bank for discount. In many cases this process was complicated by the interposition of the respective banks of vendor and purchaser in the presentation of the draft for acceptance and in subsequent collection. In fact, these disadvantages were so acute that after 1900 they brought about a decline in the use of the trade bill in England and displacement by the bank overdraft, which is

the British counterpart of the American commercial loan on a promissory note.

The granting and renewal of short-term unsecured bank loans around 1900 was ordinarily a highly informal process. The banker relied heavily upon his personal knowledge of the principals of a borrowing concern, and there was an absence of elaborate credit information or analysis of financial statements. Business concerns tended to be smaller than at present, unincorporated enterprises were relatively more important, and ownership was more closely identified with management — all of which made for a more personal credit relationship. Credit departments and credit files were just beginning to appear in the larger metropolitan banks.

Commercial banks also injected credit into business enterprises through collateral loans and real estate mortgage loans, although to a minor extent. The principal forms of collateral security were stocks and bonds, bills of lading, warehouse receipts issued against the deposit of staple commodities in public warehouses, and accounts receivable. The loans were generally repayable either on demand or within thirty days to six months, and they differed from discounts of unsecured customers' notes in that the full face amount of the note was advanced to the borrower, interest being added to the principal at time of repayment. They were an important method of financing traders and speculators in the basic agricultural commodities. Loans secured by mortgages on real estate were not used widely as a normal and accepted basis for business credit; they were taken generally to strengthen the position of a loan otherwise secured or as a device for dealing with borrowers in distressed conditions. The National Bank Act severely restricted the volume of such loans, which were frowned upon by orthodox bankers on the ground that they did not rest upon a foundation of "saleable merchandise or collectible debt."

LONG-TERM BUSINESS CREDIT TECHNIQUE, 1900

The long-term business credit market in the United States at the turn of the present century was much more limited than the short-term market, both in size and in the range of businesses served. Electric utility, manufacturing, and trading corporations were only beginning to become important issuers of long-term bonds and notes.

Railroad, telegraph, and traction companies dominated the corporate bond market. Long-term loans secured by real estate mortgages were available from local capitalists, insurance companies, and savings institutions, but not to an important degree from commercial banks. Commercial banks extended long-term business credit through their purchases in the open market of corporate bonds, notes, and debentures, and through their participation in security underwriting. However, their outstanding short-term business credits around 1900 were probably five times greater than their long-term credits.[3]

As members of banking groups and syndicates, the larger commercial banks purchased new issues of debt securities directly from business corporations and distributed those issues to the public. Investment banks, insurance companies, and wealthy individuals also participated in the syndicates; and banks and insurance companies frequently took for their own investment accounts part or all of their respective participations in such groups. Britain and Western Europe still were important sources of investment funds.

Because of the concentration of domestic savings among a relatively small investing class, the distribution of new issues was much narrower than it became later. Since surpluses of individual savings tended to be largest in the New England and Atlantic Seaboard States, the eastern banks were the principal participants in long-term credit operations around 1900, although such centers as Cleveland, Chicago, and St. Louis were becoming important. Commercial banks participated in purchase groups and syndicates initially through their bond departments and later through the security affiliates which they organized. Frequently, they acted as the originating banker and syndicate manager.

The techniques of appraising long-term business credit were much less formal than they came to be in the twenties and after the advent of federal regulation under the Securities Act of 1933. The use of independent auditors, engineers, or other outside experts was seldom resorted to, and industrial surveys and analyses of balance

[3] In 1900 the 10,382 reporting banks of the United States held $1,963 million of bonds other than federal obligations, while their loan portfolios were valued at $5,658 million. Because a considerable portion of bond holdings represented municipal and other nonbusiness credits, it is safe to say that the outstanding long-term business credits of banks were no more than one-fifth of the short-term loans. *Annual Report of the Comptroller of the Currency*, 1900, Vol. I, p. xxxix.

sheet, profit-and-loss, and other financial statements were less intensive than in later years. The prospectuses made available to potential purchasers of a new issue were amazingly brief, when judged by standards of the 1930's after the establishment of the Securities and Exchange Commission. The name and reputation of the banking house sponsoring or selling a new issue were regarded by the public as important evidence of the worth of the security.

FORCES SHAPING CHANGES IN TECHNIQUES, 1900–1940

Broadly speaking, the underlying forces that shaped the demand for business credit during the period 1900–1940, and which called forth the alterations in the institutional structure of credit supply noted in Chapter 4, also explain the changes in the techniques of business lending. These underlying forces, which will be treated in detail in Chapter 6, were rapid growth in the dimensions and complexity of the American economy, rising importance of fixed capital instruments in the productive process, enlarged use of consumer durable goods, instability in business activity, expansion of government as an agency of capital formation, and a tendency toward lower interest rates after 1930. While these factors were of basic importance, certain other forces influenced more directly the credit decisions of the loan officer of a commercial financing institution — such forces as growth in the corporate form of business organization, development of business accounting, lengthening of the average term of business credit, and emergence of "mass financing" methods in consumer lending.

The increase in the relative importance of the corporation as a form of business organization is indicated by a sample drawn from annual issues of the *Reference Book of Dun & Bradstreet, Inc.* Five percent of the total number of enterprises in 1900 were corporations, 11 percent in 1920, and 12 percent in 1940, with corporations being especially frequent in manufacturing, wholesaling, and mining industries. Among manufacturing industries, corporations accounted for 65 percent of all business transactions conducted in 1899 and for 93 percent in 1939. In trade, 16 percent of the net worth of all concerns with net worth under $1 million was owned by corporations in 1900, whereas 40 percent was so owned in 1940.

The significance to the business credit market of the increased im-

portance of the corporation lay in the fact that incorporation limited the risks of ownership and increased those of creditorship, and that it facilitated the separation of ownership from management in business enterprise. Moreover, the growth of the corporate holding company and tangled corporate interrelationships complicated the task of credit appraisal. More elaborate appraisals of creditworthiness were called for. Banks were virtually compelled to formalize their methods of collecting and filing credit information, and to adopt standard procedures of credit analysis. In many cases these functions became so important that separate credit departments were created within bank organizations. A few such departments, mainly in the case of large banks, came into existence after the turn of the twentieth century, but they did not become numerous until after the establishment of the Federal Reserve System in 1913. By 1940 most medium-sized and large banks had specialized credit departments.

The enlargement and elaboration of business accounting records during the present century made more readily accessible to lending institutions, at relatively short intervals of time, detailed information about the operations and financial positions of businesses, and thus made it possible for lenders to advance credit by methods impracticable in earlier times. The increase in volume and quality of business records occurred for a number of reasons. One was the growth in size and breadth of ownership of business concerns and in the separation of ownership from management, which made necessary more precise information, both as an aid to management and as a method of appraising the effectiveness of management. Another cause was the passage of the Federal Reserve Act in 1913, which prescribed that banks had to maintain credit files on customers whose acceptances were presented to Federal Reserve banks for rediscount. Even more important was the stimulus of heavier taxation and more comprehensive governmental regulation of businesses; in this connection the emergence of the federal tax on corporate net income in 1913 was especially significant.

The increase in long-term business credit during the twentieth century also influenced credit technology. Commercial banks expanded their open market purchases of corporate bonds and notes, particularly after World War I, and the larger banks intensified their underwritings and distributions of corporate securities through

affiliated corporations. One of the reasons why banks desired growing portfolios of marketable corporate securities, particularly during the 1920's, was that they were making an effort to maintain or increase earnings in the face of increased deposits and relatively declining commercial loans. This adaptation was encouraged by the theory that bond portfolios provided commercial banks with "secondary reserves" — that is, with liquidity additional to that afforded by the "primary reserves" of cash maintained in a bank's own vault or in the central bank.

Closely related to these developments was the expansion during the 1920's of bank lending on stock and bond collateral and on real estate mortgages, which gave impetus to the formulation of long-term credit standards and methods. As a result, personnel skilled in the extension of long-term credit became essential in commercial banking. The organization of securities or investment departments of the larger banks dates from this period. In many cases the personnel of these departments later were used in the extension of term loans and in the purchase of private placements of corporate securities.

The emergence of consumer instalment sales financing during the 1920's and its adoption by commercial banks in the 1930's caused banks to learn those special techniques of loan extension and collection which may aptly be termed "mass financing." Banks tended to emulate the credit methods previously worked out by the cash loan and sales financing agencies, whose success in the consumer sales financing field unquestionably led banks to enter the producer equipment financing field and the accounts receivable business, both of which involved use of a similar technique. In fact, many banks assigned the administration of these new types of business loans to the instalment financing departments which they had previously established.

At the beginning of the present century an obvious schism between theory and practice existed in bank credit relationships with business enterprises. Short-term credit forms were used in connection with the advance of funds performing long-term functions in borrowing concerns. But while orthodox theory held that only the trade acceptance was an appropriate commercial banking asset, banks did, in fact, hold somewhat less than one-half of their earning assets in 1900 in the form of business loans (excluding agricultural

and real estate loans) and business securities. After 1900 sanction was increasingly given to the use of bank funds in other kinds of assets. This transition in viewpoint was due in part to the greater prominence given to "secondary reserves." The expansion, after 1914, of savings and time deposits also accentuated the development.

While commercial banking theory was being liberalized, new techniques of financing business were being developed. After the 1920's, it was gradually discovered that extension of credit is a technology which, like other technologies, is subject to adaptation, innovation, invention, and research. It is not an overstatement to say that in the two decades from 1920 to 1940 debt financing went through a technical revolution as far-reaching in its significance as technical advances in industrial production, transportation, or agriculture. The roots of this change may be traced back many years, but the great deflation of the 1930's, the subsequent reconstruction and revitalization of the financial system, and the drastic fall in interest rates all accelerated its progress. The essence of this technical revolution in debt financing consisted of the development of more effective methods of meeting the needs of business for short- and medium-term credit, particularly the needs of small and medium-sized enterprises. Among these methods were four of special significance, namely, the term loan, the accounts receivable loan, the loan secured by field warehouse receipts, and the loan financing the sale of commercial and industrial equipment. Each emerged as a commercial bank activity in the early thirties, and each represented an adaptation of commercial banking to changed economic conditions.

TERM LOANS AND PRIVATE PLACEMENTS OF SECURITIES[4]

A term loan is a credit extended directly by a lending agency to a business concern, and part of it is legally repayable after one year. A private placement of debt securities is a term loan, except that the transaction takes the technical form of sale and purchase of

[4] This section is based principally upon the materials in Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942), which traces the historical development of the term loan.

negotiable securities. Both credit forms by-pass the public money markets and are not readily shiftable by the lending institution through sale.

Banks gradually have developed specialized credit standards and methods of appraising and limiting the risks in term lending. Because the appropriate credit appraisal methods are closely akin to those used in investment banking, term lending has caused many banks to consolidate the functions of their investment and credit departments. The comparatively large size of term loans and their lack of marketability have meant that lenders cannot rely to any considerable extent upon diversification to limit risks, nor can they usually look to a public market for a continuing appraisal of the borrowers' credit. Banks therefore have attempted to compensate for this by the care with which they scrutinize each loan application, the foresight with which they frame the loan agreement, and the diligence with which they "police" the loan.

The preliminary investigation of the applicant for a term loan of substantial size is necessarily quite thorough. The prospective borrower is required to furnish audited balance sheets, operating statements, budgets when available, and other financial information running over a number of years preceding the loan application, and the physical condition of the applicant's properties often is surveyed by engineers. All data are analyzed to determine whether the bank's financial standards can be met, and to estimate the prospective annual earning power of the enterprise, especially the amount of cash that can be "thrown off" each year to amortize the loan. Repayment provisions — even the maximum term of the loan itself — are generally geared to the cash "throw-off" ability. The secular trend of the industry of which the applicant for a loan is a member, the competitive strength of the applicant in that industry, and the competence of its management are all carefully reviewed.[5]

Many term loans are extended under so-called "revolving credit" arrangements, whereby the borrowing business acquires the right to borrow a specified maximum amount for a stated term of years, but the actual indebtedness at any time is represented by notes

[5] See *Airline Finance*, a brochure prepared by Bankers Trust Company, Mutual Life Insurance Company of New York, The Chase National Bank of the City of New York, and New York Trust Company (New York, 1945) and dealing with the commercial air transportation industry, for an example of the technique of industrial and company analysis utilized by term lending institutions.

of shorter term which may or may not represent that maximum. As these notes mature, they may be replaced by other short-term obligations, so that the credit "revolves" in the sense of being represented by a series of legal instruments. At the same time, the commercial bank is committed to advance the maximum amount, and the borrower ordinarily pays a commitment fee in return for this "call" on the lending capacity of the bank.

Nearly every bank term loan is accompanied by an agreement under which the debtor covenants to conduct his business in prescribed ways during the term of the loan.[6] While "tailor made" to fit the circumstances of the borrower, the agreement commonly contains restrictions on the borrower's total indebtedness, requires the borrower to maintain certain financial ratios and to furnish financial statements periodically to the lender, provides for acceleration of the entire debt under certain circumstances, specifies any collateral security that is required, and may subject capital expenditures to the review and approval of the lender. Term loan agreements are premised on conditions obtaining when the loans are made, but provision may be made for alterations when necessary in response to unforeseen changes in these underlying conditions.

The special virtue of the term loan as a legal basis for business credit, when contrasted with the traditional short-term note, is that it embodies the idea of "planned credit." The process of making a term loan requires borrower and lender to consider the problem of repayment beforehand, and to adopt a realistic schedule of debt amortization that is consistent with the operations of a business. The factors that bear upon the continued use of the term loan as a device for financing business are treated at length in Chapter 8.

From the time of its inception, the term loan has been a method of injecting long-term bank credit directly into medium-sized and large businesses that were nevertheless smaller than those whose bonds and notes were sold publicly. At the outbreak of World War II, the bulk of term-loan credit had been extended to large concerns, although commercial banks had shown a definite shift between 1936 and 1941 toward the making of term loans to medium-sized and small businesses. By mid-1941 more than 55.3 percent of

[6] See Association of Reserve City Bankers, *Term Lending by Commercial Banks* (Chicago, 1945) pp. 11–15, for a draft of a term loan agreement containing typical terms and conditions.

the number of term loans by commercial banks were to concerns with assets of less than $5 million. In meeting the long-term credit demands of promising small businesses, term loans can be a most useful device, because alternative financing methods have not been readily available to such concerns.

ACCOUNTS RECEIVABLE FINANCING[7]

Receivables financing falls into two well-defined categories, factoring and non-notification financing. Factoring involves purchase by the factor (lender) of a concern's accounts receivable, generally *without recourse* on the vendor for any credit loss on the accounts, and *with notice* given to the trade customers that their accounts have been purchased.[8] "Non-notification financing" is conducted mainly by commercial finance companies and commercial banks. It entails the purchase of receivables, or their assignment as collateral security for loans, *without notice* to the trade customer and *with recourse* by the lender on the borrowing business for payment of any of its assigned accounts that become overdue. Because banks do not generally engage in factoring operations, the following discussion is confined to financing of the "non-notification" type.

Accounts receivable financing presupposes a continuing arrangement with a rapid turnover of trade receivables, and a formal contract is usually drawn between banker and business borrower. Under the contract, the banker agrees to advance cash to the borrower upon the security of an assignment of acceptable accounts receivable, whose value as collateral usually ranges from 70 percent to 90 percent of their face value, depending upon their quality. The bank has recourse to the borrower if the borrower's trade customers fail to pay their accounts. The statutes of certain states require that a debtor whose account is assigned must be notified before the assignment can become valid. As this is a condition which is often not satisfactory to the borrower, accounts receivable financing is not of large proportions in these states. In states where notification is not a legal

[7] See Raymond J. Saulnier and Neil H. Jacoby, *Accounts Receivable Financing* (National Bureau of Economic Research, Financial Research Program, 1943), for a more complete discussion of this type of financing.

[8] For a brief discussion of the historical development of factoring companies, see Chapter 4, pp. 120–21.

requirement, the bank usually reserves the right to notify if it becomes necessary to do so in order to protect the loan.[9]

Because the average invoice handled by the lending institution is small, operations are routinized in the interests of economy. While the procedure is by no means uniform, the mechanics necessarily involve much detail. Standard practice requires the borrower to indicate on each ledger sheet whether the account has been pledged as security for a loan. The bank customarily receives copies of all invoices representing assigned accounts, and the borrower stamps on each copy retained by him an assignment of the account. Copies of bills of lading or other documents evidencing shipment of the merchandise covered by assigned invoices are sometimes required by the banker. A usual requirement is that the borrower turn over to the bank daily the original checks received by him in payment of assigned accounts. Occasional audits of the borrower's records are made or arranged for by the lending agency. Because the outstanding loan balance fluctuates constantly, as advances are made against new assigned accounts and collections are received from matured accounts, the loans require constant supervision. Although many commercial banks have followed less formal methods of lending against assigned accounts receivable than are indicated here, in some instances eliminating certain of the precautionary measures, these banks have attempted to limit their clientele to borrowers for whom the usual precautions may be less necessary.

As might be expected, the cost to borrowers of accounts receivable credit is higher than that for unsecured loans or for most types of secured loans. The range of charges is wide, depending upon the financial strength of the borrowing business and of its customers

[9] A 1943 decision of the United States Supreme Court held that reference to state laws determines whether an assignment of receivables taken without notice to the trade debtors is a voidable preference if bankruptcy occurs within four months of assignment. This decision has led to a re-examination of state statutes on notification, as a result of which it may be expected that both state laws and the status of the business will be clarified. See United States Supreme Court decision, March 8, 1943, in case of Corn Exchange National Bank and Trust Company, Philadelphia, and Edward C. Deardon, Sr., Petitioners, vs. Norman Klauder, Trustee of Quaker City Sheet Metal Co., Bankrupt. State laws differ with respect to their requirements for notification. Some require that the books of the debtor be marked to show the fact of assignment of the account; some require the assignee to file notice of assignment with a state officer; some require that the assignee notify the trade debtors of the assignment; and some states are silent on the subject.

whose accounts are assigned, and upon the extent to which the lender must utilize elaborate procedures for controlling risks.[10]

Accounts receivable loans finance mainly businesses of small and medium size. The proportion of equity to debt among those businesses using accounts receivable loans is smaller than in other businesses of similar size. A low ratio of equity to debt in a manufacturing or trading business usually signifies either rapid growth — causing inventory and other working capital needs to outstrip the ability of the business to finance them from accumulated earnings — or past losses that have cut away part of the owners' equity.

Two factors are crucial in determining the use of accounts receivable loans in the financing of American business: the volume of business operations and the availability of short-term unsecured credit, long-term credit, and equity funds. If the volume of business is contracting or is at a low level, and business profits are unfavorable, outside short-term funds may be unavailable on an unsecured basis. When business operations are expanding and the earnings retained are insufficient to finance the resulting growth of assets, external funds will be sought, and it may be necessary to obtain some portion of these through the assignment of accounts receivable. Unsecured short-term loans, regular term loans, or equity funds, which are less costly, if readily available will tend to be substituted for those obtained from accounts receivable loans. Nevertheless, there appears to be a basis for accounts receivable financing, whatever the state of business activity and of the financial markets, since there are always some solvent businesses desiring to obtain — and able to put to work profitably — more credit than they can get on an unsecured basis. These businesses are prepared to pledge their accounts receivable as collateral security in order to obtain this added margin of credit.

FINANCING INVENTORY ON FIELD WAREHOUSE RECEIPTS[11]

The establishment of a field warehouse on the premises of a business, which pledges the resulting warehouse receipts to a bank as

[10] Interest charges in 1941 are discussed in Chapter 2, pp. 49–50.

[11] Based on Neil H. Jacoby and Raymond J. Saulnier, *Financing Inventory on Field Warehouse Receipts* (National Bureau of Economic Research, Financial Research Program, 1944).

security for a loan, is a comparatively recent credit technique whose economic function in many ways parallels that of accounts receivable financing. By this method banks are able to limit the risks of lending money to concerns with highly seasonal working capital needs or with slender equities. American banks have long granted credit on the security of warehouse receipts covering agricultural and other staple commodities deposited in terminal warehouses. But the establishment of a field warehouse on the premises of a borrowing business by a concern specializing in this activity is a modern development. The practice originated around the turn of the present century and expanded steadily, especially after 1930. Like accounts receivable loans, field warehouse receipt credit goes primarily to small and medium-sized enterprises.

Lending against field warehouse receipts has posed unique problems of credit appraisal for bankers, and has resulted in the evolution of special credit standards and methods of limiting risks. The credit elements embodied in such loans are of four classes: the field warehouse company (its financial responsibility, its experience, the form of its warehouse receipts, and the amount, coverage, and worth of its bond); the field warehouse (the validity of the lease agreement, the adequacy of the physical conditions, and the competence and integrity of the custodian); the borrowing business (the moral and financial responsibility of its principals, its financial strength, the caliber of its management, and its past and prospective earning power); and the warehoused merchandise (its value, susceptibility to deterioration, breadth of market, and price fluctuation). All banks give some attention to each of these elements, although the emphasis placed on each factor differs among banks, and for a given financial agency as between industries and borrowing concerns.

A risk-controlling factor of prime importance to the banker is the percentage that the amount of credit outstanding at any time bears to the value of the warehouse receipt collateral. This "percentage advance" determines the bank's margin of safety, or excess of collateral value that protects it in case it has to liquidate the commodities to recover its money. Other factors being held constant, the percentage advance is larger, the broader the market for the warehoused commodity, the smaller the degree of its price fluctuation, the less the normal rate of its deterioration in value during storage,

and the smaller the maximum credit line granted the borrowing concern in relation to its financial strength. Most field warehouse receipt loans involve percentage advances of between 65 percent and 85 percent.

The volume of lending against field warehouse receipts is determined by the amount of inventory in the economy and by factors similar to those determining the market for accounts receivable loans. Field warehouse receipt loans serve as a device for providing businesses with working capital, in some cases to meet peak needs of a seasonal character, in other cases to meet enduring requirements for liquid funds. The decline in inventories of civilian goods after 1942 produced a shrinkage in field warehouse receipt credit. In an economy characterized by high and expanding levels of production, accompanied by large inventory holdings by business concerns, rapid growth of new businesses, and lack of readily accessible sources of equity capital and long-term credit for small and medium-sized enterprises, conditions are favorable to the development of a large volume of loans collateralized by field warehouse receipts.

FINANCING MACHINERY AND EQUIPMENT ON INSTALMENT TERMS[12]

The financing of the acquisition of machinery and equipment by commercial and industrial business *via* instalment loans is a fourth significant development in American business credit technology. Equipment trust certificate financing of railroad equipment was, perhaps, the earliest manifestation of this type of credit operation.

Instalment equipment financing is marked by three characteristics: specific use of the credit by the borrower to acquire income-producing machinery or equipment; retention by the financing agency of title to, or a lien on, the equipment by means of a conditional sales contract or bailment lease for the purpose of securing the debt; and amortization of the debt in instalments. Commercial banks extend this kind of credit in two ways. They purchase or "discount" the instalment sales contracts held by manufacturers or dis-

[12] This section is based on Raymond J. Saulnier and Neil H. Jacoby, *Financing Equipment for Commercial and Industrial Enterprise* (National Bureau of Economic Research, Financial Research Program, 1944).

tributors who sell the equipment (indirect financing); and they make direct instalment loans to the business concerns buying the equipment, enabling them to pay cash to the manufacturers or distributors (direct financing). In indirect financing the equipment manufacturers and distributors are the direct grantors of credit, and the banks, in effect, are credit wholesalers. The banks' function is analogous to that which they perform in acquiring assigned accounts receivable. In direct financing the average instalment cash loan made to finance equipment purchased is much larger than in indirect financing, but the down-payment and repayment provisions are similar to those found in indirect financing.

Credit analysis in equipment financing has three focal points: the character of the equipment, the credit standing and financial responsibility of the purchaser of the equipment, and the financial responsibility of the seller. In regard to the equipment, the banker estimates its expected service life, its usefulness and value to the purchaser, its probable repossession value, and the validity of the available title or lien. The last factor requires detailed knowledge of the particular market in which the used chattel might have to be sold. The purchaser of the equipment requires evaluation because he has the primary obligation of paying the debt. This evaluation is crucial whenever recourse of the bank upon the manufacturer (seller) is limited, when the equipment is wholly or partly nonrepossessible, or whenever repossession is likely to involve substantial costs. Attention is given to the vendor of the equipment because he accepts responsibility for its satisfactory installation, and because he usually has a contingent liability on the financing contract.

Equipment financing is often a mass financing operation. A process of continuing credit supervision begins when a bank makes an arrangement to purchase or take assignments of the numerous instalment contracts originated by a particular manufacturer or distributor. As the arrangement proceeds, the banker periodically "ages" the contracts he holds, calculates the delinquency and charge-off ratios, and observes trends in the types of equipment sold, the terms of the contracts, and the credit ratings of the buyers. On the basis of these observations, the financing arrangement may be altered, terminated, or extended. The bank usually advances 80 to 90 percent of the face amount of contracts that it acquires, thereby accumulating a customer's "reserve," from which deductions

can be made if certain contracts prove to be excessively delinquent or uncollectible.

In the typical financing arrangement, the vendor of equipment acquires more than credit from the financing agency. He obtains such services as credit appraisal and collection, legal advice and assistance in the preparation of documents, engineering counsel, and even general management advice. In some cases these ancillary services appear to count for more than the credit itself in the estimation of the borrower.

The market for instalment equipment loans is proximately determined by the quantity of equipment passing into the hands of businesses unable to finance its purchase with available equity or open-line credit, and also by the propensity of manufacturers and distributors of equipment to carry their own paper instead of utilizing their working capital for other purposes. Underlying determinants of these variables are the rate of technological progress, the amount of working capital possessed by enterprises selling and purchasing equipment, and the terms on which additional working capital can be obtained by alternative methods. In an expanding economy, marked by increased mechanization of productive processes and a rapid rate of obsolescence of old equipment, the value of new income-producing equipment annually passing into the hands of business concerns is large. If such an economy is also one that offers opportunities for new and small enterprises, many of them may find it expedient to acquire equipment on instalment terms. If, in addition, manufacturers and distributors of equipment have ample alternative opportunities for employing their working capital, and if they desire the specialized credit, collection, and other services that equipment financing agencies can render, a large volume of instalment equipment loans might be made.

SIMILARITIES IN THE NEWER TYPES OF BUSINESS LOANS

Twentieth century developments in the technique of supplying credit to business have been based on a number of discoveries about the relation of credit to business enterprise. In one form or another, the four types of business loans just described involve applications of these discoveries. They all conform to a common basic pattern.

First, credit arrangements need to be fashioned according to the special character of the production and merchandising processes of the business being financed. Loan agreements so fashioned are not only more satisfactory to the borrower but sounder from the point of view of the lender. The formulation of such agreements requires detailed knowledge of the industry to which the borrower belongs, the position in that industry of the borrowing concern, and the general underlying economic situation.

Second, much of the credit used by business is needed for more than one year, and the amortization of such credit depends more on a flow of income over time than on the conversion of short-term trading assets into cash.

Third, the need of individual companies for short-term credit is typically continuous. Demand is in part responsive to the seasonal features of the industry involved, but it is not, as is sometimes supposed, discontinuous in the sense that the need for short-term credit is eliminated, or nearly so, for extended intervals.

Fourth, the credit needs of business are most nearly met by an arrangement under which the amount of credit in use is automatically adjusted to these changing needs.

Fifth, if credit extension is subjected to careful study and research, a gradual reduction in costs may be achieved.

All the new types of loans explicitly recognize a fact which the older forms ignored, i.e., that much of the credit used in business is needed for more than one year. This recognition is explicit in the term loan and in instalment equipment financing, but it also is present in inventory or receivables financing, where both debtor and creditor enter into an arrangement that contemplates a long-term loan of fluctuating amount. The four types of loans do explicitly what the traditional short-term loan did impliedly through the practice of successive renewals. These types of lending necessarily call for a more elaborate credit appraisal and forecast of the earning power of the debtor business than was considered necessary under the old forms.

Another thread in the new business credit pattern is the gearing of loan amortization requirements closely to the power of the business to make repayment. Term loans to oil producing businesses, for example, have carried repayment schedules determined by the net revenue from the probable flow of oil from producing proper-

ties after deducting out-of-pocket expenses. Instalment loans made to finance the sale of Diesel-electric generating equipment have frequently been repayable in a series of instalments, the amounts of which have been equal to the periodic savings to the borrower resulting from the installation.

A third bond between these newer types of loans is the close adjustment of outstanding credit to the actual requirements of the borrower for funds, and the basing of interest charges on the amount of funds actually in use. These characteristics are quite apparent in accounts receivable financing and in field warehouse receipt lending, where the loan balance fluctuates from day to day, reflecting the changing balance of either outgoing credit sales of the borrower over incoming payments, or of inventory receipts over inventory withdrawals, respectively. They are also present to a considerable degree in term loans that permit the borrowing business to "take down" only the amount of credit it requires, and to repay the loan in instalments. The trade acceptance has this same virtue. In contrast, in the traditional loan a business borrows a definite amount from its bank for a specified period of time and maintains a fluctuating deposit balance at the bank without automatic adjustment of the outstanding loan balance and of interest charges.

Cooperation between banks in assuming and carrying loan risks is another feature of modern business lending technique. Several banks take participations in a loan for various reasons; for example, the total amount of the loan may exceed the legal loan limit or the self-imposed limit set by the policy of a bank, or the banks with which the borrowing concern has continuing relationships may participate at the instance of the borrower. Cooperation is most frequent in term lending where the amounts of individual transactions are large, but it also occurs in instalment equipment and field warehouse receipt lending. The bank originating the loan is usually assigned the task of supervising it, and may be paid a special fee for its service. Extensive cooperation among American banks in business lending emerged during the 1930's, and this cooperation may have provided a partial substitute for the economic functions which commercial paper houses formerly performed in spreading risks on large "open market" business loans and adding to the mobility of unused bank lending power.[18]

[18] See Albert O. Greef, *The Commercial Paper House in the United States* (Cambridge, Mass., 1938) Ch. XIV, for an appraisal of the economic function performed by

"Mass financing" also is a common characteristic of the modern business credit forms. It requires that bank examiners weigh the competence of a bank for engaging in such credit operations as lending against accounts receivable, field warehouse receipts, and instalment equipment paper, all of which may involve the handling according to routine procedures of many relatively small items of collateral, and for formulating new methods and standards of appraising such collateral. Sampling methods are substituted for the evaluation of every piece of collateral; and certain standards are applied to the average performance of a large number of individual small accounts rather than to the performance of every item of paper.

Perhaps the most significant development of all is the fact that modern types of business loans are applicable to the credit needs of small and medium-sized business — that is, the segment of the business population which is widely believed to have suffered from inadequate credit facilities — and several of them are specially designed to serve these needs.

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commercial paper houses. It seems plausible that cooperative lending provided a means whereby banks could discharge these functions by themselves, at least to a limited extent.

Chapter 6

UNDERLYING FORCES SHAPING THE BUSINESS CREDIT MARKET, 1900–1940

THE BUSINESS CREDIT MARKET after 1900 was influenced by numerous forces which may properly be described as underlying in nature and pervasive in effect. Some of these forces have been dealt with above, primarily in Chapter 3: long-term changes in the relative importance of enterprises of different size and industrial character; long-term shifts in the relative importance of different types of assets held by nonfinancial business concerns; and certain discernible shifts in the policies and practices of concerns with respect to the way in which their assets are financed. These long-term changes were considered in Chapter 3 because of their immediate relation to changes in the business credit market, which it was the purpose of that chapter to describe. The present chapter will discuss certain salient trends in the American economy which, while somewhat less directly related to the business credit market, had profound and lasting effects on that market.

The basic underlying forces selected for discussion include:

(1) The growth factor in the American economy, somewhat retarded during the early twenties and definitely interrupted in the thirties

(2) The marked increase in the ratio of capital to labor in many important sectors of the economy

(3) The fairly persistent increase in the relative importance of the output of consumer durable goods

(4) The persistent and, to a certain extent, growing instability of business activity

(5) The expansion of government as an agency of capital formation

(6) The decline of interest rates, particularly after 1930.

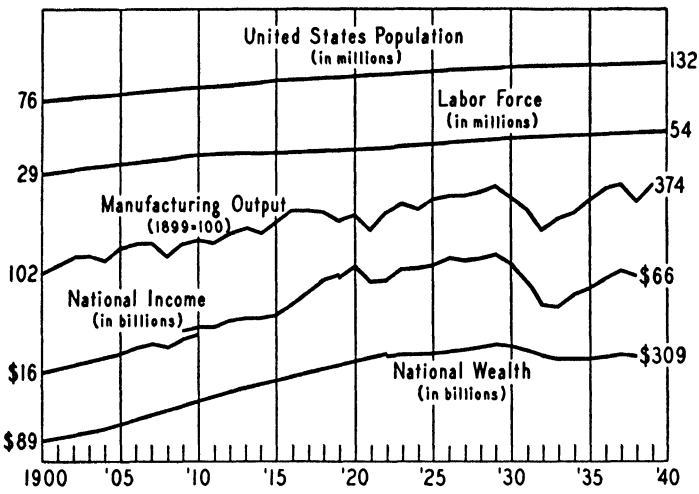
In some cases these factors were, to a great extent, independent of the banking and credit system proper; in others, changes in the business credit market and in these underlying factors were mutually dependent. Thus, credit conditions affected, as well as were affected by, fluctuations in business activity; and the declining trend of interest rates may be viewed as a change in the business credit market itself. This distinction between factors mainly independent of the banking and credit system and other, interdependent, factors is a useful one to bear in mind. Another useful distinction is that between long-term trends, such as those in population and production, and short-term fluctuations, such as changes in prices and profits, which exerted profound influences on the business credit market.

ECONOMIC GROWTH

Growth in the American economy after 1900 was at different rates in different periods, but the over-all result was one of tremendous expansion, as is clearly shown by the several measures of economic change presented in Chart 25. First of all, population nearly doubled between 1900 and 1940, with the rise more rapid in the first half than in the second half of the period. Beyond this, important internal shifts in population distribution, which are closely related to economic growth, took place. The urban population increased from about 30 million people in 1900 to nearly 75 million in 1940, while the rural population remained comparatively stable, rising from 46 to 57 million. Thus the population distribution as between town and country was wholly reversed in forty years.

Paralleling the growth in population was the growth in the labor force. Various estimates of the numbers in the labor force show marked discrepancies, since they were derived in different ways, but the same general pattern is apparent in all. The estimates of the National Industrial Conference Board (Chart 25) reveal a rate of growth almost exactly the same as that of the total population. Any over-all series on the labor force, however, veils important shifts in the distribution of employment by industries. For example, between 1900 and 1929 the proportion of the working population engaged in agriculture dropped from 35 percent to roughly 22 percent. Workers in industry, on the other hand, increased from 37

Chart 25 — MEASURES OF GROWTH IN THE AMERICAN ECONOMY, 1900–1940
(logarithmic vertical scale)



The dominant factor in the American economy from 1900 to 1930 was persistent growth. During the early thirties, the growth factor was absent; by most measures, the recovery of the late thirties did no more than approach the high levels of the twenties.

percent to around 40 percent; in trade and finance, from 12 percent to 17 percent; and in service industries, from 14 percent to 19 percent. When these data are carried forward to 1940, the only significant change beyond the pattern established by 1929 is a further increase — to slightly over 22 percent — in the proportion employed in the service industries.

The participation of increasing numbers of people in the process of production was accompanied by an even greater growth in the output of manufacturing industries, although this was interrupted in the thirties. After a sharp decline from 1929 through 1932 output increased again, but in 1939 it was only slightly above its 1929 peak.

Estimates of national income and wealth also record substantial

growth during the first three decades of the century, and then a decline. Although increases again occurred after the early thirties, the levels reached were not so high as those attained in the twenties. The rates of growth of national income and wealth were considerably above that of population, meaning that per capita income and wealth increased. This fact is important in the present study, because the continuing improvement in the economic welfare of the average American consumer, which it reveals and which was reflected in his consumption habits, is of peculiar significance to credit developments.

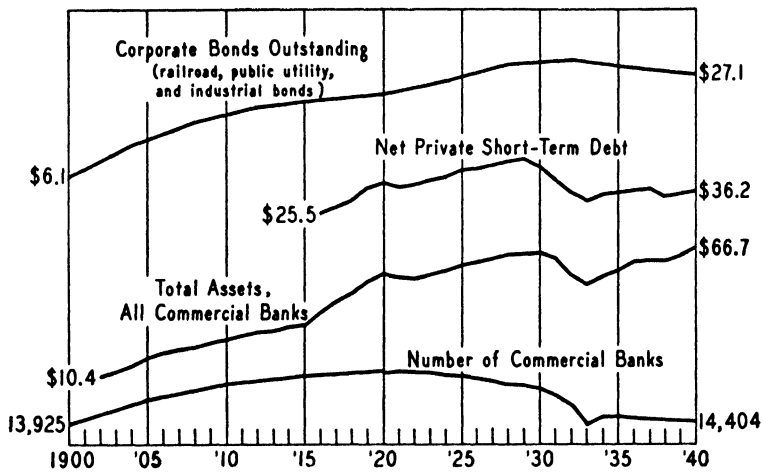
The business credit market, like other segments of the economy, experienced a considerable expansion from 1900 to 1930 and an interruption of that expansion in the thirties (Chart 26).[1] Rough approximations of the magnitude of the long-term credit market (measured by changes in corporate bonds outstanding)[2] and of the short-term credit market (measured by changes in private short-term debt and, prior to 1916, by the trend of total bank assets)[3] indicate that each element increased fivefold during the first three decades of the century. In the thirties, however, when the long-term credit market held close to the level attained by the late twenties, the short-term market contracted more sharply than any other

[1] Not all the measures that are needed to trace changes in the magnitude of the business credit market are at hand, and some that are available cover more than the business element in the credit market; but information is fairly complete from 1916, and inferences can be made from other materials for the earlier years. Such broad measures as can be obtained are grouped in Chart 26.

[2] Quadrennial estimates have been made by the Corporate Bond Project, National Bureau of Economic Research, Financial Research Program. These data indicate that corporate bonds outstanding increased from $6.1 billion in 1900 to $33.4 billion in 1932; after a very moderate decline during the thirties, the total stood at $27.1 billion in 1940. Other estimates of long-term business debt are available and, while they differ from the above in amount, they reveal almost exactly the same rates of growth and retardation over comparable periods. These estimates are the National Industrial Conference Board series on the outstanding corporate debt of steam railroads, public utilities, and industrial corporations, 1900–1942 (*The Economic Almanac for 1943–44*, p. 383), and the series on net private long-term corporate debt, 1916–42, compiled by the Department of Commerce (*Survey of Current Business*, July 1944, p. 16).

[3] The nearest approach to an estimate of the short-term business credit market is a Department of Commerce series on *private* short-term debt for 1916–40. On the assumption that this can be taken as a fair indication of the direction and extent of change in *business* short-term debt for these years, the short-term business credit market can be said to have doubled from 1916 to 1929. Changes from 1900 to 1916 can be judged only from the trend during those years in total bank assets. Under the assumption that the relation between the two series which prevailed in 1916–29 also characterized the period 1900–1916, private short-term debt in 1900 may be estimated at something under $10 billion.

Chart 26 — MEASURES OF GROWTH IN THE BUSINESS CREDIT MARKET, 1900–1940
(*dollar figures in billions; logarithmic vertical scale*)



The business credit market, like the economy as a whole, was constantly expanding in the first three decades of the century. Long-term business debt stabilized in the fourth decade, while short-term debt decreased.

sector of the economy. Contrary to the behavior of most other series, net private short-term debt failed by 1940 to regain its 1929 level.

Accompanying this spectacular over-all expansion in the dimensions of the business credit market was an expansion in the facilities and resources of the commercial banking system. In 1900 there were 8,738 commercial banks incorporated under national and state banking laws, and 5,187 unincorporated private banks, a total of 13,925. By 1920 this total had more than doubled, but then a rapid decline began and in 1933 the number was about the same as in 1900. This decline reflected in part bank consolidations after 1920 and in part the closure of banks, particularly in rural areas. The 1933 number was maintained with only negligible change through 1940. A more adequate series for revealing the growth of

the commercial banking system is total bank assets. By this measure, bank resources expanded over sixfold from 1900 to 1940; only in the thirties did a significant interruption occur, and this was temporary. Over the whole period there was a remarkable increase in the assets held by the average bank.

How did the underlying force of economic growth affect the business credit market, aside from the effects obvious in the above measures of the market's expansion and decline? The most important effect from the point of view of the present study was the change in the competitive conditions of the market, caused by the shift from fairly regular expansion during the first three decades to the contraction and partial recovery of the fourth. During the early period, when the total demand for business credit was growing more or less persistently, there was little basis for inter-agency competition. This condition was wholly altered, however, when the underlying growth factor was lost; each agency was faced with increasing problems of competition, as its assets grew and the demand for private business credit declined. It is not surprising, therefore, that some of the most striking institutional changes in the business credit market appeared in the fourth decade of the century.

Specifically, the contraction of the business credit market during the thirties, and the consequent necessity for business financing agencies to use new methods of financing or to reach out into new credit fields, if they were to hold their own, forced the initiation and spread of new lending techniques. As indicated in earlier chapters, these occurred in three main areas — consumer instalment credit, intermediate-term credit to large and medium-sized business enterprises, and newer types of secured credits to small businesses — all of which, while they constituted new areas of lending for commercial banks, were areas in which other agencies were already functioning. The result was heightened inter-agency competition.

Economic growth also affected the conditions under which the business credit process was conducted. During the first decade of the century business was conducted in the main through enterprises of relatively small unit size; some of these were national organizations, but in most instances operations were relatively limited in geographical scope. Further, the market situation in which they operated was far less complicated than it became in later years. Economic growth meant not only an increase in the average size of the

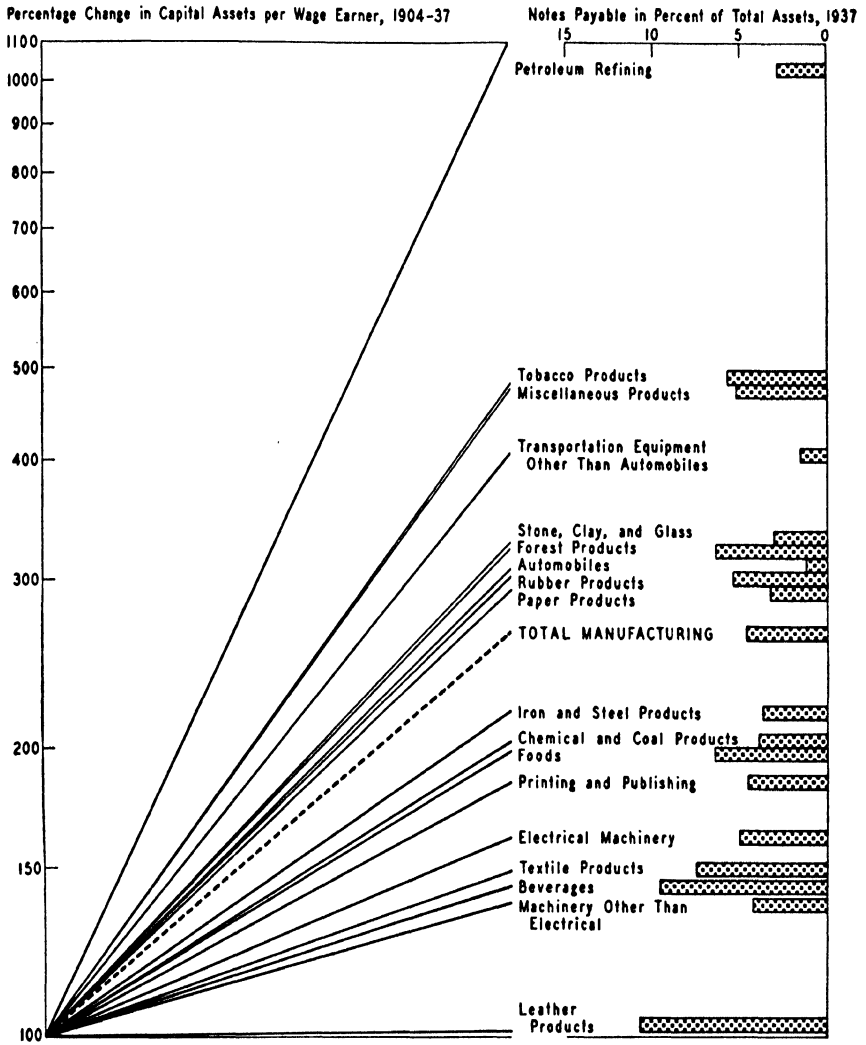
business unit and of the commercial bank, but also an increasingly complex set of market conditions; the whole process of business management became institutionalized and depersonalized through the agency of the large corporation. In consequence, the task of credit appraisal grew more complicated and less amenable to practice on the basis of personal relationships.

INCREASING RATIO OF CAPITAL TO LABOR IN PRODUCTION

Technological progress resulted in a marked increase in the ratio of capital equipment to direct labor in the productive process. This development can be measured in a number of ways, but for present purposes its extent may be indicated by reference to two measures: the ratio of "capital assets" (net of land) to the number of wage earners employed in manufacturing industries, and the proportion of fixed assets to total assets for the samples of corporations analyzed in Chapter 3. The first measure, shown in Chart 27, reveals that capital assets (net of land) per wage earner in manufacturing as a whole increased by 264 percent between 1904 and 1937. Of course, there were considerable differences in the extent of change among industrial subdivisions; increases were especially marked in petroleum refining, where capital assets per wage earner in 1937 were eleven times as great as in 1904, whereas the ratio for leather products remained constant over the period. Output per worker, which is a rough and indirect reflection of the use of capital equipment, expanded between 1902 and 1939 by 180 percent in mining, including oil and gas, and by 94 percent in manufacturing. In agriculture an increase of 64 percent occurred between 1900 and 1937.

The effects on business credit demands of more intensive use of capital in production may be summarized briefly. First, by increasing the optimum size of individual concerns as measured by total assets, the development meant that a higher proportion of business was done by larger concerns. As indicated above, the larger enterprises tended to depend less than small concerns on the banks for funds. Second, the greater importance of fixed assets relative to current operating assets, as shown in Chapter 3, had the effect of placing increasing emphasis on long-term as contrasted with short-term funds. Thus the industries that showed a greater than average

Chart 27 — CHANGES IN CAPITAL ASSETS PER WAGE EARNER IN MANUFACTURING INDUSTRIES, 1904–37, COMPARED WITH DEPENDENCE ON BANK CREDIT, 1937



Those manufacturing industries that experienced the greatest relative increases between 1904 and 1937 in the amount of capital assets utilized per wage earner were in general the least dependent on bank credit as a means of financing in 1937.

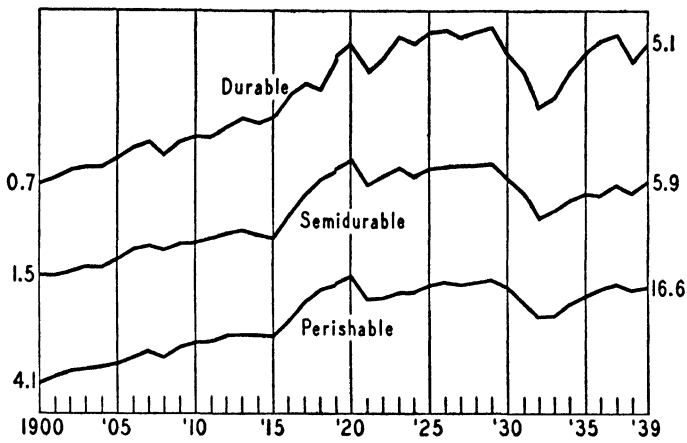
increase in capital assets per wage earner were, in 1937, generally less dependent on bank credit than those industries with a less than average increase. Third, the use of specialized capital equipment changed the character of credit demands. Increasingly, credit demands grew out of the acquisition of specific items of equipment, especially among manufacturing, trade, and service concerns of small and medium size. These demands meant not only an expanding market for medium-term credit but also the assumption of relatively high risks where the debtor was of only moderately good credit standing and where a lien was held on equipment susceptible to a high rate of depreciation. Finally, by increasing the potential (and actual) variation in annual business investment expenditures, the rising ratio of capital to labor contributed to the instability of the economy with consequences that will be discussed in a subsequent section.

ENLARGEMENT OF USE OF CONSUMER DURABLE GOODS

Another reflection of the technological progress and higher standards of living achieved during the twentieth century was the increase in the relative importance of consumer durable goods, compared with those of a semi-durable and perishable nature. While the value (in current prices) of the output of these last two groups of commodities increased about four times between 1900 and 1939, the value of the output of finished consumer durable goods expanded more than seven times. The most marked difference in growth, as shown in Chart 28, occurred in the twenties when the rate of output of durable goods increased rapidly while production in the two other categories increased only moderately or not at all. It is significant that the change in consumer durable goods was due mainly to greater output of new commodities and not to increased production of older types of goods.

The growth in the importance of consumer durables had two important effects upon business credit demand. First, the altered structure of consumer expenditures which it implies, with greater emphasis on expenditures on durable commodities, increased both the potential and actual degree of variation in annual consumer outlay. Chart 28 shows that instability was greatest in the output of durable, and least in the output of perishable, goods. By contrib-

Chart 28 — OUTPUT OF FINISHED CONSUMER GOODS, 1900–1939
(*in billions of dollars at current prices; logarithmic vertical scale*)



The value of output of consumer durable goods increased more than sevenfold from 1900 to 1939, contrasted with the fourfold increase of other types. Wider use of these high-unit value goods laid the basis for the development of consumer instalment financing.

uting to instability in the economy, the shifting composition of the flow of consumer goods produced consequences similar to those traceable to a rising ratio of capital assets to labor. Second, the increase in the relative importance of the durable goods component of total consumer goods output during the twenties was due mainly to increased output of automobiles, household appliances, and radios, each of which is a commodity of high unit value and commonly purchased on an instalment basis. The greater demand for such goods laid the basis for the rapid development after 1920 of the sales financing industry and the later participation of commercial banks in consumer instalment financing.

The implication of this second effect for the institutional structure of the credit market has already been noted: whereas commercial banks were extending virtually no credit to finance companies in 1920, such loans had increased by 1939 to the point where they

nearly equaled total bank loans to manufacturing concerns. It was estimated that loans to finance companies in 1939 amounted to $1.3 billion, and those to manufacturing concerns to $1.6 billion, out of an estimated total of $5.1 billion of short-term loans to commercial and industrial enterprises. To this sizable quantity may be added direct consumer instalment financing by banks, which was estimated as $1.0 billion at the end of 1939 — or about 6 percent of total loans and discounts and 17.5 percent of commercial and industrial loans held by all banks. If the two types of financing — loans to finance companies and direct loans to consumers — are combined, the total equals nearly 14 percent of total loans and discounts of commercial banks at the end of 1939.

INSTABILITY IN BUSINESS ACTIVITY

Both the increasing ratio of capital to labor and the greater relative importance of the durable goods component of total consumer goods output tended to make the economy potentially and actually more unstable, and thus influenced the business credit market. The increasing instability in business activity after 1900 is shown by data on the physical output of manufacturing industries. As indicated in Chart 25, production after World War I was disturbed by three major setbacks; two of these (in 1920–21 and 1937–38) involved a loss of about 20 percent each, and the third (1929–32) a loss of nearly 50 percent. By contrast, during the decade and a half preceding World War I the four years in which the index of manufacturing output was lower than in the preceding year, namely 1904, 1908, 1911, and 1914, the percentage declines in the index were 6, 17, 4, and 6 percent, respectively. A similar record of increasing instability is provided by data for bank clearings outside New York between 1882 and 1936.

Data on the sales and profits of business concerns do not extend sufficiently far back to support generalizations concerning changes in the degree of instability in economic activity. Measures that are available, however — such as sales of samples of manufacturing and trade corporations from 1915 to 1940 and ratios of net income to net worth, also based on sample data — reflect the highly unstable market background against which credit extending agencies have functioned since 1915.

The primary effect on the business credit market of economic fluctuations was to increase the risk inherent in the credit-granting process. Consequently, the serious fluctuations in the 1920's and 1930's tended to encourage both borrowers and lenders to take an increasingly cautious view of the financing process. On the part of the borrower, cyclical fluctuations stimulated the desire for as large a measure of independence from external sources of funds as possible, placed a greater premium on ownership than on debt funds where external financing was required, and suggested the use of relatively longer-term loans so as to minimize the contingency of having to repay loans at a time when the concern's general financial position was worsened by successive years of losses or of relatively low earnings.

From the viewpoint of the financing agency, the occurrence of business depressions, and especially the continuance for some years of low levels of activity and profitability, had a serious effect on risk conditions. Successive annual deficits among the small and medium-sized concerns that comprised the majority of business loan borrowers caused a reduction of their capital and general weakening of their financial condition and credit standing. To operate satisfactorily under such circumstances lending agencies had to have recourse to various types of risk-limiting devices. This underlying factor was responsible in large part for the development and wider use during the thirties of such devices as those described in Chapter 5, namely, the assignment of accounts receivable, warehouse and trust receipts, and liens on equipment.

The second major effect of economic fluctuations on the business credit market is found in the enlargement of public controls over credit extending activities. The framework of law and regulation within which commercial banks operated as business lending agencies was dictated in large part by the necessity, as the legislatures saw it, of preventing banks from exposing themselves to certain risks associated with economic instability. Thus, the limitations found in the national banking laws with respect to loans made on real estate and the security of stock exchange collateral, and to investment in equity securities, are examples of social controls the purpose of which is to restrain banks from excessive participation in types of lending and investing peculiarly susceptible to loss during periods of business recession.

Finally, after 1929 prolonged underemployment of resources became the basic factor underlying the rise of government agencies prepared to lend directly in the business credit market, or to assume some of the risks involved in credits extended by private agencies. The industrial lending activities of the Federal Reserve banks and the Reconstruction Finance Corporation and their risk-sharing programs developed out of depression conditions. Also, the insurance of home mortgages and of home modernization loans under the Federal Housing Administration was intended primarily to stem the tide of business recession and to encourage private lending agencies to expand their activity in the field of home financing.

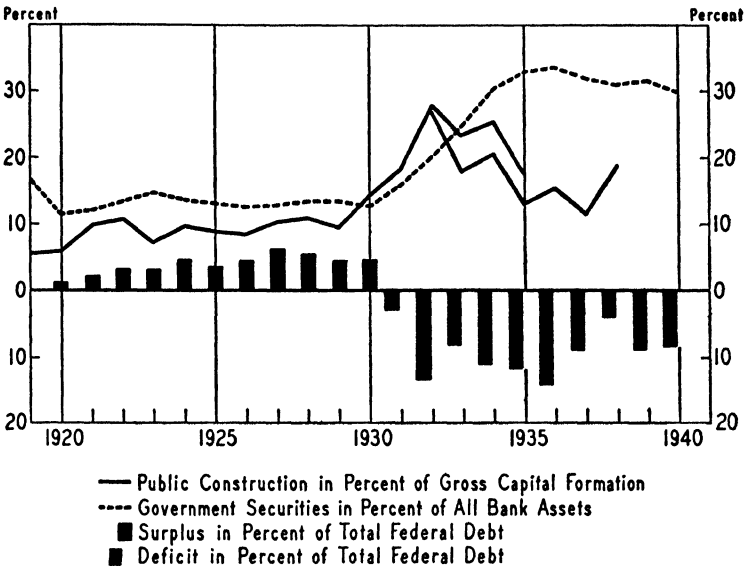
EXPANDING ROLE OF GOVERNMENT IN CAPITAL FORMATION

A development of fundamental importance to the business credit market in the period under review was the steady increase in the role of government in capital formation. By supplying an ever-widening range of services and developing natural resources, government enlarged the part it played in the productive activity of the community, and correspondingly in the financial system.

A rough index of this development is provided by data for public construction as a percentage of gross capital formation (Chart 29). This index reveals a steady increase in the importance of public capital formation during the twenties and a very sharp rise in the early thirties, attributable mainly to the fact that private capital formation declined more than public construction. While data on capital formation in later years were compiled on a somewhat different basis, and therefore are not strictly comparable with those for the earlier period, they show quite clearly that toward the end of the thirties the ratio of public construction to gross capital formation was nearly four times as great as at the end of World War I.

Associated with this underlying trend was a complete reconstitution of the asset structure of the banking system. At the close of World War I, government securities of national banks comprised about 16 percent of total assets; at the outbreak of World War II, the proportion was about 30 percent (Chart 29). The change, however, cannot be explained by reference exclusively to the rising proportion of public construction to gross capital formation. Two addi-

Chart 29 — PUBLIC CONSTRUCTION, BANK HOLDINGS OF GOVERNMENT DEBT, AND SURPLUS OR DEFICIT OF FEDERAL RECEIPTS OVER FEDERAL EXPENDITURES, 1919–40



Increased bank holdings of government debt in the thirties were associated with a higher proportion of public construction to total capital formation and with federal deficits.

tional conditions were important. First, the federal government operated with a net surplus of receipts over expenditures from 1920 to 1930, inclusive, and there was a substantial decline in the federal debt, offset for the most part by an increase in state and local government debt. In those years the proportion of government obligations to total bank assets remained roughly constant. Beginning in 1931, however, the federal budget showed a deficit every year; current expenses as well as expenditures on public construction gave rise to an increasing federal debt, a substantial part of which found its way into the commercial banking system. In sharp contrast, the rate of expansion of the assets of business enterprises was greatly

curtailed during the thirties, as was revealed in Chart 20, Chapter 3. Because of its low rate the asset expansion of private business which did occur was, to a higher degree than formerly, financed out of funds acquired internally and without extensive recourse to the financial markets. It was mainly the combination of these conditions in the thirties — the expansion of public, and the contraction of private, external financing needs — which produced the altered asset structure of American commercial banks. As will be seen in Chapter 7, this change in bank asset structure, clearly evident by 1940, was furthered by the economic and financial conditions of World War II.

DECLINING INTEREST RATES

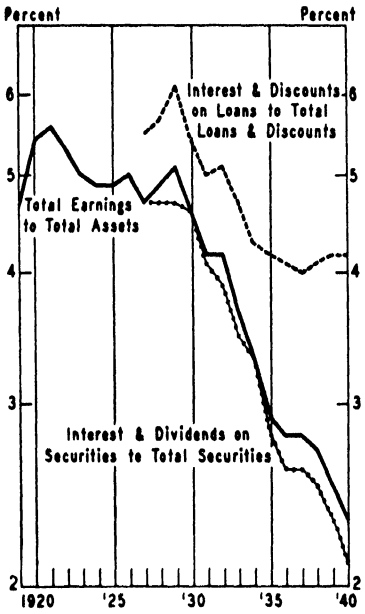
The declining trend of interest rates, particularly after 1930 — a circumstance of the credit market itself — was also a factor affecting business financing conditions. As shown in Chart 30, the ratio of total interest and dividends on securities to total security holdings declined from 4.1 percent in 1931 to 2.1 percent in 1940, while a comparable ratio for loan assets fell only from 5.0 to 4.2 percent. The combined result was to lower the earnings ratio for member banks from 4.2 to 2.3 percent, in sharp contrast to the preceding decade, when bank earnings remained roughly constant.

The primary effect on the business credit market was to intensify inter-agency competition and to induce changes in bank lending policies and techniques. The extension of bank activity into areas formerly served almost exclusively by specialized nonbank agencies has been described in earlier chapters. The fact that these institutional adjustments took place in the thirties and not in the twenties may be explained in large part by the different levels of bank earnings in the two periods and by the growing discrepancy between earnings on loans and earnings on investments.

Closer inter-agency competition and the necessity of following new lending policies and credit techniques were particularly marked in two separate but related developments: direct participation in the consumer instalment credit market and more extensive exploitation of the business credit market. The competitive conditions caused by the former development are well known. The latter took two forms, with quite different competitive results. First, commercial

banks attempted to raise earnings by extending their activities in the intermediate-term credit market where, as a rule, interest rates on long-term loans to a given quality of borrower were higher than rates on short-term loans. This was not true of all borrowers, but it may be observed that after 1930 the basic short-term yields on debt obligations fell increasingly below the long-term basic yields, whereas from 1900 to 1930 the former had, in all but two years, been either equal to or greater than the latter.[4] This policy of making longer-term advances of credit intensified competitive conditions between banks and insurance companies and, through the device of private placement, affected relations with investment banking firms. Second, loans carrying somewhat higher risks and correspondingly higher rates of return were accepted, which meant, in almost all cases, a more extensive exploitation of the financing needs of small and medium-sized businesses. This development was possible only where appropriate safeguards could be established against borrower default, thus calling for the use of specialized lending techniques. In the institutional structure of the business credit market it brought about closer competitive relations mainly between banks and commercial finance companies.

Chart 30 — EARNINGS RATIOS OF MEMBER BANKS, 1919–40
(*logarithmic vertical scale*)



Associated with the sharp decline in member bank earnings was a growing discrepancy in the thirties between earnings on loans and earnings on investments.

[4] David Durand, *Basic Yields of Corporate Bonds, 1900–1942* (National Bureau of Economic Research, Technical Paper 3, June 1942) Chart 3, p. 16.

Part III

EFFECTS OF WORLD WAR II ON THE BUSINESS CREDIT MARKET

Chapter 7

EFFECTS OF WAR ON THE BUSINESS CREDIT MARKET, 1940–45

AFTER 1940 THE BUSINESS credit market was dominated by the enormous war production program. The most obvious effect was a large expansion in the funds acquired by business to finance a doubled physical volume of production. Among the less obvious consequences were changes in the size and industrial composition of borrowing businesses, alterations in the terms and conditions of credit, and a redistribution of the business credit supply as between governmental and private institutions, and as between commercial banks and other private lending agencies. There was a striking increase in the over-all profitability and liquidity of businesses, traceable to the expansion in the money supply that accompanied a vast increase in federal spending, financed in large part through bank purchases of government securities.

MAGNITUDE AND NATURE OF WARTIME ECONOMIC EXPANSION

The financial force behind the upsurge in production after 1939 clearly was the unprecedented money outlays of the federal government. The amount of these outlays varied sharply in certain roughly distinguishable phases of the war period. During the first phase which ran from July 1940, following the fall of France, through November 1941 the average annual rate of war expenditures by the government was $9.0 billion. In the second phase, from December 1941 through October 1942, and in the third, which extended through December 1943, the rate of war expenditures amounted to $43.5 billion and $80.3 billion, respectively; while during the fourth period, beginning January 1944 and ending with the surrender of Japan in August 1945, the rate increased to $89.4 billion.

The vast disbursements by government for personal services and commodities are reflected in the index of the physical volume of industrial production of the Board of Governors of the Federal Reserve System. This index (adjusted) rose from 114 in March and April 1940 to a wartime peak of 247 in October-November 1943 — an increase of 117 percent — then receded to 230 in July 1944, stabilized during the remainder of that year, increased again to 236 in February 1945, and thereafter decreased sharply. Other measures of productive accomplishment, which do not rely so heavily as the Federal Reserve index upon man-hours worked, give much lower estimates of the growth in production.[1] As a measure of the financial requirements of business enterprises, however, the money value of production is more significant than the physical volume. Gross national product — the value of currently produced goods and services flowing to government, to business for gross capital formation, and to consumers — is estimated at $97 billion in 1940, $187 billion in 1943, $198 billion in 1944, and $197 billion in 1945.

For the most part, the huge increase in production after 1940 resulted from drawing upon unemployed manpower and facilities and from utilizing human and physical resources more intensively. In a rich nation with large unemployed and partially-employed resources, it proved possible to superimpose most of the immense war production program upon civilian output. Nevertheless, a growing fraction of the output of war materials after 1941 owed its origin to curtailments or stoppages in the production of particular types of civilian goods, and to transfers of the personnel, materials, and facilities to war production. During 1942 drastic reductions or stoppages were ordered in the output of such important consumer durable goods as housing, automobiles, radios, refrigerators, and electrical appliances, and by March 1943 nearly two-thirds of all manufacturing and mining output was for war purposes.

Manufacturers, distributors, and consumers widely anticipated the mounting intensity of the war production program, and stocked up with consumer commodities; inventories in the hands of distributors and consumers continued to expand for some time after the peak of civilian production had been passed. Department store stocks

[1] See, for example, Geoffrey H. Moore, *Production of Industrial Materials in World Wars I and II* (National Bureau of Economic Research, Our Economy in War, Occasional Paper 18, March 1944).

increased during 1941 and the first half of 1942 to the highest point in history;[2] but after July 1942 record-breaking sales caused by continually mounting income payments to consumers brought a sharp decrease in stocks. This curtailment, like that in the production of consumer durable goods, had an important influence upon demands by business for credit from banks.

An important development of the post-1941 period was a decline in the amount of credit used to finance the distribution of consumer goods. The diminishing quantities of many types of consumer durable goods flowing into consumption, combined with the tightening of consumer credit under Regulation W of the Federal Reserve System and the enlarged ability of the public to pay cash for its purchases, reduced outstanding consumer credit from a peak of about $10 billion at the close of 1941 to $5.4 billion at the end of 1943. While small increases occurred in the next two years, the figure at the end of 1945 was only $6.7 billion. Most of the reduction after 1941 was accounted for by instalment credit, and was closely geared to production stop-orders for automobiles and other consumer durables. While commercial banks were the direct retailers of only a minor part of these loans, they "wholesaled" much of the balance through their loans to consumer financing agencies; thus the commercial loans of banks bore the brunt of this extraordinary withdrawal of consumer credit.[3]

The war brought about a 15 percent reduction in the business population. Between late 1941 and the end of 1943 some 1.1 million business enterprises — 30 percent of all those in operation at the close of 1941 — closed their doors, while only about 572 thousand concerns were organized, leaving a net decline of more than 500 thousand in the number of operating businesses. Beginning in 1944, however, increases were again reported, and by June 1945 about one-half of the 1941–43 loss had been regained.

The majority of businesses discontinuing in 1942 and 1943 were small concerns whose owner-managers entered the armed

[2] The behavior of consumer goods inventories in the hands of manufacturers cannot be observed, because available data do not separate such inventories from inventories for war purposes. Presumably a rapidly mounting fraction of manufacturing inventories was of the latter type after 1941.

[3] Total consumer instalment credit of commercial banks fell from $1,694 million at the end of 1941 to $514 million at the end of 1943, a decline of $1,180 million or more than 70 percent. Such credit at the close of 1945 amounted to $731 million. *Federal Reserve Bulletin*, July 1946, p. 803.

Table 14—Estimated Number of Operating Business Concerns, by Major Industrial Divisions, Selected Dates, 1941, 1943, and 1945[a]
(*in thousands*)

Industrial Division	*Number of Firms*			*Change*	
	Dec. 31, 1941	Dec. 31, 1943	June 30, 1945	Dec. 31, 1941 to Dec. 31, 1943	Dec. 31, 1943 to June 30, 1945
Contract construction	241.2	147.1	166.4	−94.1	+19.3
Manufacturing	225.4	227.6	249.4	+2.2	+21.8
Wholesale trade	143.8	114.0	133.2	−29.8	+19.2
Retail trade	1,590.8	1,318.0	1,417.7	−272.8	+99.7
Service industries	631.2	547.5	591.7	−83.7	+44.2
Mining and quarrying	24.1	26.0	25.9	+1.9	−0.1
Transportation, communication, and public utilities	204.7	187.9	200.2	−16.8	+12.3
Finance, insurance, real estate	279.8	267.5	281.3	−12.3	+13.8
Total	3,341.0	2,835.6	3,065.6	−505.4	+230.0

[a] From *Survey of Current Business*, May 1944, Table 1, p. 10, and May 1946, Table 6, p. 21.

forces, transferred to more lucrative employment in war plants, or closed because of inability to obtain necessary labor and materials for operations. As is shown in Table 14, two-thirds of the decrease in the business population during this period was accounted for by the retailing and service industries; but the relative contraction in wholesaling and in contract construction was larger than in either retail trade or the service lines. The disappearance of half a million enterprises undoubtedly had some influence on the demand for credit, by altering the size-distribution of the business population.

BUSINESS DEMAND FOR FUNDS: THE WARTIME GROWTH OF ASSETS

The doubling of the gross national product between 1940 and 1944 was accompanied by a substantial increase in business assets, and by a large concurrent increase in demand by businesses for funds to acquire both fixed and current assets.

Until the early part of 1942 private investment in new plant and equipment was heavier than government investment; subsequently, however, the largest expenditures on fixed assets were made by the federal government. Such a high degree of uncertainty surrounded the future value of most of the wartime plant that the Defense Plant Corporation, War Department, Navy Department, Maritime Commission, and Reconstruction Finance Corporation built, equipped, and operated vast arsenals; they also built, equipped, and leased to business enterprises even larger amounts of fixed facilities.

The cost of industrial facilities expansion initiated in the period July 1940–June 1944 amounted to $33 billion. As indicated in Table 15, the greater part of this investment was in manufacturing industries, whereas investment in transportation (apart from the huge merchant marine and air transport fleets), other public utilities, and mining industries was only minor. Comprehensive data covering the war period for trade and service industries are not available, but it is likely that shortages of manpower and priorities on materials reduced outlays very much below normal levels.

In view of the fact that the net book value of the fixed assets of all nonfinancial corporations at the end of 1939 was approximately $85 billion, it is apparent that the $33 billion of public and private

Table 15—Cost of Industrial Facilities Expansion Initiated, July 1940–June 1944[a]
(*dollar figures in millions*)

Product or Service	*Public*		*Private*		*Total*	
	Amount	Percent	Amount	Percent	Amount	Percent
Manufacturing	$15,872	94.5%	$ 7,633	47.3%	$23,505	71.4%
Transportation and communication	386	2.3	4,242	26.3	4,628	14.0
Other public utilities	459	2.7	1,948	12.1	2,407	7.3
Petroleum, extraction, and mining	78	.5	2,319	14.3	2,397	7.3
Total	$16,795	100.0%	$16,142	100.0%	$32,937	100.0%

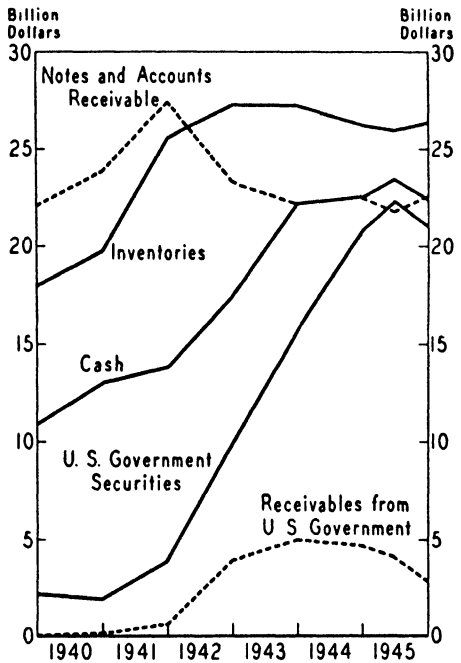
[a] From War Production Board, *Facilities Expansion, July 1940 — June 1944* (Facts for Industry, Series 50-4-1, September 22, 1944) Tables 1, 7, and 13.

investment in war industrial facilities produced much less than a 50 percent increase in the magnitude of the nation's fixed plant. Such a rough estimate indicates that the doubling of gross national product between 1940 and 1944 was in large part achieved by a more intensive use of plant.

Estimates of the Securities and Exchange Commission and the Department of Commerce reveal that investment in plant and equipment by private concerns, excluding agriculture, was greater in 1945 than in any year since 1942 but less than two-thirds of that in the peak year 1941, adjustment having been made for differences in the price level. As war controls were lifted and materials became available, expenditures increased steadily, with those in the final quarter of the year substantially above those in the first.

From the end of 1939 to the end of 1944 the current assets of all corporations, excluding banks and insurance companies, on an unconsolidated basis are estimated to have risen by $44.2 billion, and a further rise of $0.5 billion took place in the first half of 1945. An expansion in holdings of United States government securities accounted for $20.0 billion of the increase after 1939, and cash for $12.9 billion (Chart 31). While cash plus government securities more than tripled in amount, inventories increased by only 43 percent, or $7.7 billion.

Chart 31 — CURRENT ASSETS OF CORPORATIONS, EXCLUDING BANKS AND INSURANCE COMPANIES, 1939–45



Between the end of 1939 and June 1945 cash holdings more than doubled, holdings of government securities increased tenfold, and inventories rose by 43 percent.

This reflected both the accumulation by the federal government of stockpiles of strategic materials and other inventories, which were turned over to business concerns for fabrication, and the great reduction in inventories of consumer goods to which reference has already been made. While inventories of consumer goods accounted for a major part of the increase in the current assets of business up to the end of 1941, these stocks melted away rapidly thereafter.

Manufacturing concerns experienced a larger dollar expansion of current assets between 1939 and mid-1945 than did those in any other industrial division, according to a tabulation of corporations registered with the Securities and Exchange Commission (Table 16). While the dollar amount of the rise for railroads was dwarfed by that in manufacturing industries, railroads had the largest percentage increase — 242 percent — of all groups. This performance of the railroad companies reflects the relatively low prewar base of their current assets, their high wartime earnings, the comparatively less heavy wartime taxation of their profits, and large accumulations of deferred maintenance.

An outstanding feature of the four-year period, 1941–44, was the great expansion, in all fields except retail trade, in both fixed and current assets of small and medium-sized businesses, compared with large concerns; the increase was especially marked among those enterprises engaged in war industries.[4] This behavior is traceable to the fact that the percentage gains in sales volume, profit margins, and net profits after federal income taxes were significantly greater among small concerns; but it should be recalled that small businesses in general entered the war period with lower profit margins than did large concerns. It may be inferred that the high mortality rate among small businesses after 1941 was confined to very small

[4] Securities and Exchange Commission data covering corporations whose securities are registered with the Commission provide an adequate view of wartime changes in the financial structure of large businesses. Wartime changes in the financial structure of small and medium-sized concerns are revealed by an analysis, made by the Board of Governors of the Federal Reserve System, of a sample of enterprises of all sizes whose financial statements were assembled under a cooperative arrangement between the Robert Morris Associates and the Board of Governors, beginning with the year 1941. See Frederick C. Dirks, "Wartime Earnings of Small Business" and "Wartime Financing of Manufacturing and Trade Concerns," *Federal Reserve Bulletin*, January 1945, pp. 16–26, and April 1945, pp. 313–30, for this analysis which covers the three years 1941, 1942, and 1943. Additional data, covering 1944, also compiled jointly by the Robert Morris Associates and the Board of Governors, have been analyzed by the present authors; data for 1945 are not available.

concerns in certain lines, and that those small businesses which survived improved greatly their relative position in the economy.

Table 16—CURRENT ASSETS OF CORPORATIONS IN DIFFERENT INDUSTRIAL DIVISIONS, DECEMBER 1939 AND JUNE 1945[a]
(*dollar figures in billions*)

Industrial Division	*Current Assets*		*Change from Dec. 31, 1939 to June 30, 1945*	
	Dec. 31, 1939	June 30, 1945	Amount	Percent
All United States corporations[b]	$54.6	$99.3	$44.7	81.9%
1,228 corporations registered with SEC[c]	16.3	36.0	19.7	120.9
802 manufacturing corporations	11.1	25.9	14.8	133.3
388 manufacturing corporations in war industries[d]	5.7	16.2	10.5	184.2
414 manufacturing corporations in nonwar industries[e]	5.4	9.7	4.3	79.6
79 railroads	1.2	4.1	2.9	241.7
50 public utility systems[f]	0.7	1.2	0.5	71.4
105 trade corporations	1.1	2.1	1.0	90.9
36 financial corporations[g]	1.4	0.8	−0.6	−42.9
269 manufacturing corporations with assets under $5 million	0.3	0.8	0.5	166.7
470 manufacturing corporations with assets from $5 million to $100 million	4.1	10.3	6.2	151.2
63 manufacturing corporations with assets of $100 million and over	6.7	14.8	8.1	120.9

[a] From Securities and Exchange Commission, Statistical Series, Release No. 755, November 7, 1945, and *Working Capital of 1228 Registered Corporations, December 1939 — June 1945* (Supplement to Statistical Series, Release No. 755) December 5, 1945.

[b] Banks and insurance companies excluded.

[c] All types of corporations except banks and insurance and investment companies. Figures are on a consolidated basis.

[d] Iron and steel, nonferrous metals, electrical supplies and equipment, machinery, transportation equipment, chemicals, and rubber products.

[e] Foods, tobacco, beverages, textiles, paper, oil refining, leather, building materials and equipment, and miscellaneous manufacturing.

[f] Electric light, power, heat, gas, water, etc. Includes both holding and operating companies.

[g] All types of finance except banks and insurance and investment companies.

SUPPLY OF FUNDS TO BUSINESS: WARTIME GROWTH OF NET WORTH AND INDEBTEDNESS

Business corporations financed the large wartime increase in total assets both by expanding their short-term liabilities — particularly tax accruals and other items due to the federal government — and by retaining an unusually large part of their substantial profits. Because the net fixed assets owned by business appear to have declined after 1941, some part of the large increase in current assets represented investment withdrawn from property account. When government-owned plant leased to private concerns is taken into account, there was, of course, a large rise in the amount of fixed assets operated by business.

Although the wartime increase in net working capital exceeded the increase in net worth, as a result of the excess of depreciation and depletion accruals over private expenditures on fixed property, the war period nevertheless witnessed rapid growth in the net worth of business. Between 1939 — a year of depressed business — and 1942 the net profits of all corporations more than doubled, even after deduction of heavy income and excess profits taxes, and thereafter tended to stabilize. Business managements, probably anticipating a postwar period of uncertainty or reduced profits, followed ultra-conservative dividend policies, disbursing only a minor fraction of the wartime increase in net earnings in the form of cash or property.[5]

The distribution of wartime gains in sales and net profits was quite unequal. The greatest percentage gains in business volume and profits were enjoyed by small and medium-sized concerns, whose relative profitability rose more than did that of large enterprises or very small businesses. While net profits as a percentage of net worth for small and medium-sized manufacturing concerns were lower than for large manufacturing businesses in 1940, they were definitely higher in 1943.[6]

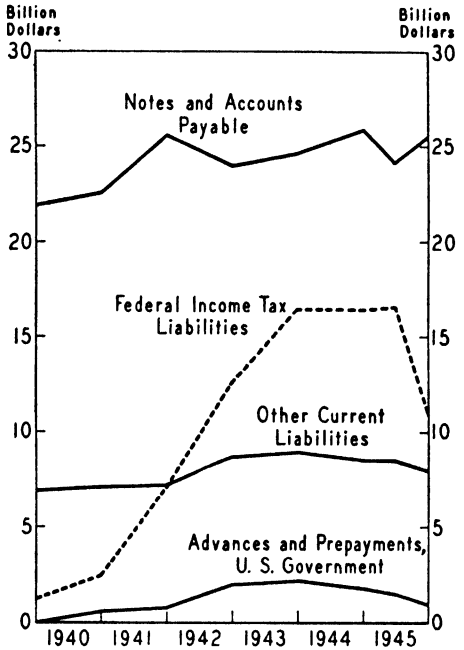
The increase in the net working capital of business corporations between December 1939 and June 1945 was relatively larger than

[5] Net income after taxes of all active corporations, excluding intercorporate dividends, increased from $4.0 billion in 1939 to $8.5 billion in 1944, and dividends paid increased from $3.8 billion to $4.3 billion, according to estimates of the Treasury Department. See *Monthly Letter of the National City Bank of New York*, April 1945, p. 41.

[6] See F. C. Dirks, *op. cit.*, *Federal Reserve Bulletin*, January 1945, pp. 16–23.

the increase in either current assets or current liabilities, since current assets rose more rapidly than current liabilities. As indicated above, this increase in net working capital was not, of course, matched by an increase in net worth because of the growth of deferred maintenance and the decline in property accounts. Net working capital rose by 95 percent, current assets by 82 percent, and current liabilities by 71 percent, and a slight increase occurred in the ratio of current assets to current liabilities. By far the largest share of the increase in current liabilities consisted of short-term funds owed the federal government in the form of accrued taxes and advances and prepayments on war production contracts. In addition, a substantial share of the $2.7 billion increase in notes and accounts payable may be traced to accounts payable to trade creditors who were war contractors for whom the reporting business was a subcontractor.

Chart 32 — CURRENT LIABILITIES OF CORPORATIONS, EXCLUDING BANKS AND INSURANCE COMPANIES, 1939–45



Between the end of 1939 and mid-1945 federal income tax accruals increased about thirteen times, while other types of current indebtedness remained comparatively stable.

The net debtor-creditor relationship of corporations, excluding banks and insurance companies, to the federal government changed in favor of corporations. While the indebtedness of corporations to government rose by $16.7 billion between December 1939 and June 1945 on account of accrued taxes and advances and prepayments by the government on war contracts (Chart 32), the indebtedness of the government to corporations rose $24.1 billion on account of securities and receivables due to corporations.

Certain significant differences in wartime changes in liabilities of small and of large manufacturing and trade concerns may be observed.[7] Because of the greater percentage increases in net profits of small concerns, referred to earlier, the increase between 1940 and 1943 in the net worth of small businesses ranged from 25 to 50 percent, with the increases becoming progressively smaller among medium-sized and large companies. This tendency persisted in 1944. Net working capital also grew more among small than among large concerns. Nevertheless, the rise in accrued federal tax liabilities was more rapid among small concerns, and only about one-half of this increase was covered by holdings of federal securities, as against an almost complete coverage by the aggregate holdings of large concerns.

FLUCTUATIONS OF BANK LOANS TO BUSINESS, 1940–45

The behavior of bank loans to business in the war period was outwardly paradoxical. In 1940 and 1941 outstanding business loans — measured by commercial and industrial loans — rose steadily, expanding by 45 percent or approximately the same percentage as that for the physical volume of production, when measured by the Federal Reserve index (Chart 33). Then, in the face of strongly increasing production, business loans declined sharply during 1942 and up to mid-1943. This decline was due entirely to a phenomenal decrease, amounting to about $4.3 billion, in bank credit for civilian business, only partially offset by an increase of $2.0 billion in bank loans to finance production of war goods, which rose from $1.3 billion at the end of 1941 to around $3.3 billion at mid-1943.

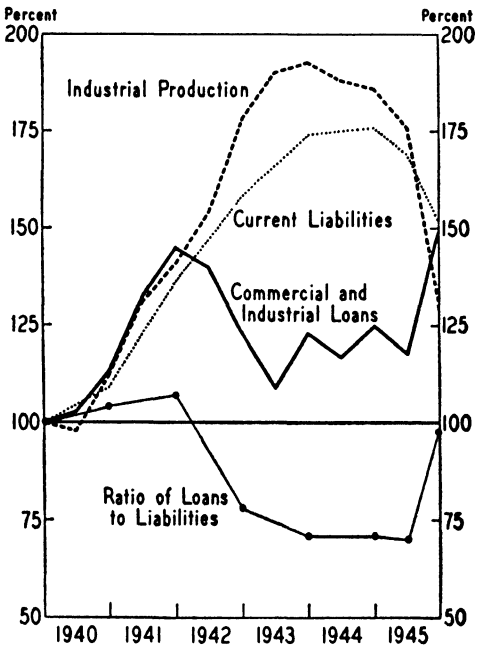
After mid-1943 commercial and industrial loans of banks again expanded; between June 1943 and June 1945 the increase in loans to civilian business was about $.9 billion.[8] The principal reason for the expansion was the use of V and VT loans by businesses, whose managements became more aware of the problems of "thawing out" large amounts of working capital tied up in inventories and receivables connected with government work, and of the need for ample liquid funds during the reconversion period.

[7] F. C. Dirks, *op. cit.*, *Federal Reserve Bulletin*, April 1945, p. 321, supplemented by the present authors' analysis of the Robert Morris Associates — Board of Governors of the Federal Reserve System sample of corporate financial statements for 1944.

[8] Total loans rose about $.6 billion, while war production loans declined $.3 billion.

The reduction in the relative importance of bank loans as a source of short-term funds for business is revealed by a tabulation of the current liabilities of the sample of corporations discussed above.[9] Between the end of 1939 and the end of 1941, these companies' notes payable to banks expanded at practically the same rate as their total current liabilities so that at the close of 1941, as in 1939, notes payable formed about 15 percent of their short-term debt. But by the end of 1943 this percentage had dropped to 5.7 and by mid-1945 it was 6.7, reflecting principally the increased reliance upon short-term federal funds, primarily in the form of tax accruals, but also the reduction in inventories of consumer goods and the liquidation of outstanding consumer credit. By the middle of 1942 the rate of inflow of government payments for war goods delivered or in process of production had become so large that it more than offset the rate of outflow of cash to finance the expansion in production.

Chart 33 — Relation of Commercial and Industrial Loans of Insured Banks to Industrial Production and to Current Liabilities of Corporations, Excluding Banks and Insurance Companies, 1940–45
(*December 1939 = 100*)



During 1940 and 1941, commercial and industrial loans expanded in proportion to industrial production and current liabilities of business; in 1942 and through mid-1943, when production increased sharply, loans declined. Subsequent loan expansion was moderate until the second half of 1945.

[9] See p. 178.

Table 17—NOTES PAYABLE TO BANKS BY CORPORATIONS IN DIFFERENT INDUSTRIAL DIVISIONS, DECEMBER 1939, DECEMBER 1941, AND JUNE 1945[a]
(dollar figures in millions)

Industrial Division	*Notes Payable to Banks*			*Percentage Change*	
	Dec. 31, 1939	Dec. 31, 1941	June 30, 1945	Dec. 1939 to Dec. 1941	Dec. 1941 to June 1945
1,228 corporations registered with SEC[b]	$808	$1,487	$1,142	84.0	−23.2
802 manufacturing corporations	182	409	975	124.7	138.4
388 manufacturing corporations in war industries[c]	62	152	627	145.2	312.5
414 manufacturing corporations in nonwar industries[c]	120	257	348	114.2	35.4
79 railroads	92	29	13	−68.5	−55.2
50 public utility systems[c]	38	33	18	−13.2	−45.5
105 trade corporations	23	46	42	100.0	−8.7
36 financial corporations[c]	458	941	63	105.5	−93.3
269 manufacturing corporations with assets under $5 million	14	26	62	85.7	138.5
470 manufacturing corporations with assets from $5 million to $100 million	129	235	512	82.2	117.9
63 manufacturing corporations with assets of $100 million and over	39	148	401	279.5	170.9

[a] From Securities and Exchange Commission, *Working Capital of 1228 Registered Corporations, December 1939 — June 1945* (Supplement to Statistical Series, Release No. 755) December 5, 1945.
[b] All types of corporations except banks and insurance and investment companies. Figures are on a consolidated basis.
[c] For industries included, see footnotes to Table 16, p. 179.

WARTIME CHANGES IN THE USE OF BANK FUNDS BY BUSINESS

Among the major industrial divisions of the economy, large manufacturing concerns, particularly producers of war goods, experienced a sharp increase in the use of bank funds during the war years, just as they experienced a spectacular expansion in assets and in value of output. Trade and financial corporations in contrast (judging from tabulations of notes payable to banks by corporations registered with the Securities and Exchange Commission) increased their bank borrowings substantially in 1940 and 1941, and then paid down this indebtedness during the next three and a half years; in fact, by mid-1945 financial corporations had liquidated the greater part of their indebtedness to banks (Table 17). Railroad and public utility companies reduced their bank borrowings during the entire war period. In view of the fact that banks' outstanding commercial and industrial loans rose by 18 percent between the end of 1939 and mid-1945, it appears that there was a shift of bank credit out of every major industrial division of the economy into manufacturing and, to a lesser extent, into trade concerns.

Small and medium-sized businesses engaged in nonwar activities showed little change between 1941 and 1944 (the period for which data are available) in the amount of outstanding bank loans; for concerns in this size group engaged in war manufacturing, the percentage increase was considerably greater than that for large concerns.[10] However, the use of accrued tax liabilities in financing the current operations of small manufacturing concerns increased even more markedly than did bank loans. Apparently the relative expansion in the assets of small manufacturing concerns during the war was so large that it could not be met merely by a rapid growth in net worth.

Changes in the geographical distribution of demand for bank credit reflected changes in the location of productive activity; outstanding bank loan balances increased most in those regions where war industries grew most rapidly. As indicated in Table 18, the percentage increases between the end of 1939 and June 1945 in the commercial and industrial loans of Federal Reserve member banks in the Seventh Federal Reserve District — which includes two of

[10] F. C. Dirks, *op. cit.*, *Federal Reserve Bulletin*, April 1945, p. 321, and the present authors' analysis of the Robert Morris Associates — Federal Reserve sample for 1944.

the nation's largest war producing cities, Detroit and Chicago — and in the Twelfth Federal Reserve District — which contained the great shipbuilding and aircraft plants around Los Angeles, San Francisco, and Seattle — were considerably greater than the increase for the nation as a whole.

Table 18—COMMERCIAL AND INDUSTRIAL LOANS OF ALL FEDERAL RESERVE MEMBER BANKS BY FEDERAL RESERVE DISTRICTS, DECEMBER 1939, DECEMBER 1941, AND JUNE 1945[a]
(*dollar figures in millions*)

Federal Reserve District	Amount of Loans			Percentage Change from Dec. 1939 to	
	Dec. 1939	Dec. 1941	June 1945	Dec. 1941	June 1945
Boston	$ 482	$ 695	$ 478	+44%	−1%
New York	2,181	3,191	2,663	+46	+22
Philadelphia	345	473	287	+37	−17
Cleveland	340	553	440	+63	+29
Richmond	224	305	215	+36	−4
Atlanta	253	355	287	+40	+13
Chicago	687	1,189	1,061	+73	+54
St. Louis	228	362	258	+59	+13
Minneapolis	126	170	136	+35	+8
Kansas City	216	296	231	+37	+7
Dallas	224	302	306	+35	+37
San Francisco	534	780	734	+46	+37
ALL DISTRICTS	$5,841	$8,671	$7,095	+48%	+21%

[a] From *Member Bank Call Reports*, No. 82, pp. 8–9; No. 89, pp. 8–9; No. 100, p. 7. Commercial and industrial loans include commercial paper bought in the open market, bills, acceptances, etc., payable in foreign countries, acceptances of other banks payable in the United States, and reporting banks' own acceptances.

WARTIME SHIFTS IN BUSINESS CREDIT RISKS

Wartime changes in the kinds of credit demanded by business were such as to reduce the extent to which these demands could be met by private lending institutions under traditional arrangements. An increase occurred in the average amount of credit risk. A large part of the new plant facilities was so specialized to the production of war materials that its value as collateral security for bank loans was very doubtful. Estimates indicate that only about one-third

of the government investment in war industrial facilities was sufficiently convertible to lend itself to rapid postwar disposal;[11] and even this convertible one-third of the plant was erected at such levels of cost that the investment might not be fully recovered by the government.

War production contracts also presented numerous risk-elevating forces. The managements of many enterprises had no demonstrated experience or skill in producing the products which they contracted to make for the government. Especially in the early stage of the war production program there was grave risk that the products would not pass government inspection and create good accounts receivable which would form the means of repaying bank loans, and uncertainty existed regarding federal standards of inspection and the promptness with which the contractor would receive payment for accepted products. Many concerns, especially medium-sized and small manufacturers, demanded credit in amounts far beyond their usual needs and well beyond those permitted under standards that banks had been accustomed to apply. The credit utilized by these manufacturers was often startling in relation to their net worth. Many war plants operated with borrowed funds several times the amount of their net worth, or with current assets no larger or even less than their current liabilities. Public interest in the expansion of war production caused traditional standards of creditworthiness to be thrust aside. Financial considerations were not allowed to stand in the way of enlarged production. Operating within a prescribed framework of law and public regulation designed to prevent the assumption of large risks and to protect depositors against loss, commercial banks could not meet a very large part of the greater demand for credit. New institutions, new techniques, and new powers were therefore devised.

CREDIT FACILITATING ARRANGEMENTS INTRODUCED DURING 1940–41

During the period immediately preceding the entry of the United States into the war, the larger corporations first drawn into war production financed their military orders with working capital on hand

[11] A. D. H. Kaplan, *The Liquidation of War Production* (Committee for Economic Development, New York, 1944) p. 99.

or by recourse to customary institutional sources. One of the earliest devices for facilitating the flow of credit to businesses engaged in war production was the Assignment of Claims Act of 1940. This Act permitted all claims against the federal government for $1,000 or more to be assigned to "a bank, trust company, or other financing institutions, including any Federal lending agency,"[12] thus making the claims available as collateral security for loans. Claims could be assigned under contracts either for supplies or for plant facilities.

Another early device was the Emergency Plant Facilities Contract, which provided that a contractor could erect a plant, certified as being necessary for the nation's defense, and could be reimbursed for the entire cost by the federal government in sixty equal monthly instalments following completion of the facilities. At the termination of this period, title passed to the government, unless the contractor desired to retain the plant, in which event the contractor might purchase the plant at cost less the depreciation specified in the contract or at a negotiated price. The contract thus left to the contractor the normal risks of production, but it required the government to carry the risk of plant depreciation. By assigning the payments due from the government under such contracts, contractors could secure funds from private financial institutions to finance plant construction.

A third facilitating method was a ruling of the Treasury Department that when a business expanded a plant, certified as necessary for national defense, it could amortize the total cost over a period of sixty months, deducting this amortization from its income for tax purposes.[13] Such amortization could be allowed whether the plant expansion was privately financed or financed under an Emergency Plant Facilities Contract. This ruling stimulated investment in those fixed assets which business concerns definitely intended to retain after the war.

Legislation passed during 1941 permitted the War or Navy Departments to advance from available appropriations sums not exceeding 50 percent of the contract price of supplies or facilities; two-fifths of the advances might go to subcontractors participating

[12] Public Law No. 811, 76th Congress, approved October 9, 1940.

[13] Treasury Decision 5016 relating to Revenue Act of 1940, Secs. 23, 24, approved October 23, 1940. If the war ended or the facilities became no longer necessary within less than sixty months after construction was completed, amortization of cost could be recomputed on the basis of this shorter period.

in the completion of a government contract. The advances could be authorized by Army or Navy officials, as could the so-called "progress payments" on government contracts.

The credit-granting powers of the Reconstruction Finance Corporation were broadened in 1940. On June 25 of that year the Corporation was empowered "to make loans to, or, when requested by the Federal Loan Administrator with the approval of the President, purchase the capital stock of, any business corporation (a) for the purpose of producing, acquiring, and carrying strategic and critical materials, as defined by the President, and (b) for plant construction, expansion and equipment, and working capital to be used by the Corporation in the manufacture of equipment and supplies necessary to the national defense, on such terms and conditions and with such maturities as the Corporation may determine."[14]

This Act greatly expanded the powers of the RFC to lend to businesses engaged in war production. There were no requirements in the 1940 law, such as were contained in the original 1934 legislation conferring business lending powers on the RFC, that borrowers be "solvent," that loans be of such sound value or so secured as "to assure repayment," that credit be "unavailable" at prevailing rates for the class of loan applied for, or that the borrowing businesses be "established" concerns. The existence of a national emergency was deemed sufficient cause for relaxing credit standards applicable to concerns whose production was considered vital to national welfare. Under these powers the RFC had authorized to business enterprises loans of $1.2 billion up to June 30, 1945, and it then had $0.3 billion of such loans outstanding. These loans represented credits extended, for the most part at the request of the Army or Navy Department, to concerns producing urgently-needed military supplies or services. In the beginning, many of the borrowers were subcontractors who, unlike direct contractors, were unable to obtain an advance from the government to provide sorely-needed working capital. The principal risks assumed by the RFC in granting credit to these concerns were that their costs may have been inadequately estimated and that the concerns might not be able to perform satisfactorily under a contract.

The Export-Import Bank of Washington expanded its functions in ways which had important implications for American commercial banks and the business credit market. Up to 1940 the two major

[14] Public Law No. 664, 76th Congress.

activities of this Bank were short-term financing of exports of agricultural commodities and long-term financing of exports of industrial products. In September 1940 Congress raised the amount of obligations the Bank could have outstanding at any time, removed the limitation upon the amount of credit extended to any one country, and extended the powers of the Bank.[15] Under this new authority the Bank established large credits in favor of central banks in Latin America to enable those countries to import essential products from the United States; it loaned money to their governments for the improvement of highway and railway transportation and to private interests for the production of strategic war materials. Apart from these activities, which were inaugurated as part of the grand strategy of global warfare, the Export-Import Bank also undertook to support the financial structure of foreign commerce during the emergency. For keeping open normal methods of financing American exports to Latin America when shipping space was short and delivery dates uncertain, it inaugurated a plan for underwriting letters of credit of approved foreign banks, which letters were opened in this country by American banks.

Outstanding obligations of the Export-Import Bank rose sharply from the end of 1939 through 1943, but tended to stabilize during 1944. At the end of June 1945 the Bank had outstanding loans of $0.2 billion and active commitments of $0.3 billion. It had pending many requests for credit to finance the exportation of railway, electric utility, mining, and other equipment to Latin American and other countries, as well as reconstruction in devastated areas. In order to enable the Bank to engage more extensively in the financing of postwar foreign trade, the amount of loans and guarantees it could have outstanding at any one time was raised to $3.5 billion by the Export-Import Bank Act of 1945, approved July 31, 1945.[16]

CREDIT FACILITATING ARRANGEMENTS INTRODUCED DURING 1942–45

One of the most important measures introduced to facilitate the flow of funds to enterprises participating in war production was what became known as the V loan arrangement.[17] The War Department,

[15] See Chapter 4, pp. 125–26. [16] Public Law No. 173, 79th Congress.
[17] See Executive Order 9112 issued March 26, 1942 and Regulation V of the Board

Navy Department, and Maritime Commission, under an Executive Order of the President, were authorized to enter into contracts with financial institutions under which loans to contractors for financing war production could be guaranteed in whole or in part. The Federal Reserve banks acted as liaison agencies between the federal agencies, the war contractors, and the banks. Wherever possible the Federal Reserve banks attempted to arrange a credit extension without guarantee. If this was not feasible, they arranged a guarantee of a part of the loan by the federal agency concerned. As a last resort, the federal agency might extend the funds directly, either making the entire loan itself or taking a participation therein. Regulation V, promulgated by the Board of Governors of the Federal Reserve System, provided that rates of interest were to be specified by the Board from time to time after consultation with the federal departments and the reserve banks, and that the maturity of the loans made or guaranteed under this plan should not exceed five years.

The V loan was developed to assist war contractors who needed to borrow more money than could be granted them under conservative financial standards, and to aid in the problem of financing subcontractors. However, government-guaranteed war loans offered an advantage over straight bank credit even to companies of the highest credit standing to which adequate credit was available without guarantee. Concerns financing with V loans might, in the event of cancellation of one-quarter or more of their outstanding war contracts, obtain a suspension of maturity for a proportionate amount of the loan, and a waiver of interest thereon until settlement of their claims on the government. Because of this provision, V loans were extended in many cases where credit was otherwise procurable. In practice, the great bulk of V loan credit went to large enterprises and not to small contractors.

The VT loan arrangement, announced on September 1, 1943, was a direct outgrowth of the V loan. It provided for guaranteed loans by private institutions to war contractors, not merely to supply working capital needs for war production but also to enable contractors to obtain the use of their working capital upon termination of government contracts.[18]

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of Governors of the Federal Reserve System issued thereto, effective April 6, 1942, and revised, effective September 11, 1944.

[18] *Federal Reserve Bulletin*, September 1943, p. 849.

A further expansion of the purposes of bank credit for which government guarantees could be issued was contained in the Contract Settlement Act of 1944.[19] Section 8(b) of this Act provided for interim financing of war contractors through T loans, pending payment by the government on their claims, in amounts specified as follows:

(1) 100 percent of the contract price of acceptable items completed prior to termination date of contract;

(2) 90 percent of cost of raw material, purchased parts, supplies, direct labor, and manufacturing overhead allocable to the terminated portion of the contract;

(3) a reasonable percentage of other allowable costs, including administrative overhead allocable to the terminated portion of the contract, not included in the foregoing;

(4) such additional amounts, if any, as the contracting agency deems necessary to provide the war contractor with interim financing.

This legislation was susceptible to a variety of interpretations, but it clearly permitted government contracting agencies to advance or prepay to business concerns, whose war contracts were terminated, not merely the bulk of their claims on account of such contracts but also additional working capital for financing reconversion or for other purposes. While the maturity date for such advances was no later than the date of final settlement between the contractor and the government, the period for which such credit could be used might well be long. Alternatively, government contracting agencies might guarantee loans made by banks and other private lending institutions to provide such "interim financing." Both the procurement services and the banks (under a government guarantee) were placed by this Act in a position to finance the re-entry of war contractors into civilian business.

After September 1944, only T loans and 1944 V loans were authorized. The 1944 V loans, which were similar to the VT loans previously made, were to provide working capital for war production purposes or to provide funds for both production and contract termination financing.[20]

By December 31, 1945, some 8,757 Regulation V loans had

[19] Public Law No. 395, 78th Congress, approved July 1, 1944.
[20] *Federal Reserve Bulletin*, March 1946, p. 244.

been authorized for a total amount of $10.3 billion. There was actually outstanding $0.5 billion of credit with $1.0 billion additional available to borrowers under the agreements. On the average 85 percent of each loan outstanding was guaranteed. Although a large percentage of the number of guaranteed war loans authorized was in amounts of $50,000 or less, and the amount of such credit available to small concerns appears to have borne roughly the same proportion to their sales that held for larger businesses, the greatest fraction of the amount of guaranteed war loans authorized was represented by loans above $1 million.

The powers of the RFC to supply credit to business were further broadened after December 1941. The Murray-Patman Act provided that the RFC and its subsidiary, the Defense Supplies Corporation, should assist dealers, finance companies, and banks in the carrying and marketing of motor vehicles shipped on and after January 16, 1942, when their sale was prohibited by the Office of Price Administration except under rationing orders. On May 11, 1942 legislation was approved authorizing the RFC to buy from, or make loans to, dealers in rationed commodities, on a basis enabling dealers to secure amounts equal to the costs of the commodities.[21] The RFC approved about 2,903 loans aggregating $68 million on automobiles, oil burners, tires, typewriters, and other rationed articles up to June 30, 1945.

In the interest of small manufacturers who were believed to have been overlooked in the early stages of war procurement, the Smaller War Plants Corporation was established by Act of Congress on June 11, 1942.[22] One method of aiding small business was to make loans and to lease equipment so that these manufacturers might engage in war production or essential civilian output. Although aggregate outstanding loans were limited in the original Act to $150 million, the credit-granting powers of SWPC were comprehensive and included loans to acquire land, buildings, and equipment, to finance conversion to war production, to conduct war production, to reconvert to civilian production, and to carry on civilian production. On December 1, 1944, the capital funds were increased by $200 million.

[21] See *Report of the Secretary of Commerce Covering the Activities of the Reconstruction Finance Corporation and Its Subsidiaries in Connection with the War, as of October 31, 1942*, pp. 32–33.

[22] Public Law No. 603, 78th Congress.

SWPC made direct loans, participated in loans with other financing agencies, either public or private, and made commitments to purchase part or all of the loans of other agencies. In all cases, before authorizing a loan it urged local banks to extend credit to an applicant, either alone or with SWPC participation or stand-by agreement. Loan applications were judged by SWPC mainly in the light of the urgency of the national need for the goods to be produced and the ability of the applicant to produce them; the applicant's financial statement was of secondary importance.[23] Terms to maturity of loans to provide production facilities were geared to the prospective ability of the borrower to make repayment, while the maturity of production loans depended upon the dates of completion of the borrowers' contracts. When a bank participated by assuming a share of the risk, the interest rate on the bank's portion of the loan was generally 6 percent, while that of the Corporation was 4 percent. The RFC, through the Defense Plant Corporation, acted for SWPC in disbursing and administering the loans.

The number and amount of applications for financial assistance rose slowly through 1942 and 1943, but the tempo of activity increased measurably during 1944. Between September 1, 1942 and July 31, 1945 the Corporation approved a total of $431 million of loans, of which $197 million were approved in 1944. More than half of the approved applications came from concerns making iron and steel and their products and transportation equipment. About 83 percent of approved loans provided working capital to the borrower; 12 percent were for debt retirement, supplies, land, buildings, and miscellaneous purposes; and about 5 percent were for plant equipment and machinery. The amount of credit actually advanced by SWPC to businesses was much smaller than the approved total; it amounted to $33 million on September 30, 1945.

Another federal wartime legislative act broadening the scope of government lending and loan-guaranteeing activities was the Servicemen's Readjustment Act of 1944, as amended — the "GI Bill of Rights."[24] This Act, approved July 1, 1944 and amended December 28, 1945, made available government-guaranteed loans to discharged veterans of the armed forces who had had at least ninety

[23] Public Law No. 42, 79th Congress, 1st Session.

[24] Public Law No. 346, 78th Congress. Amended by Public Law No. 268, 79th Congress.

days of service. Within ten years after the official termination of the war, a veteran may receive from the Administrator of Veterans' Affairs a guarantee of a loan — not to exceed 50 percent of the loan, or $4,000, whichever is smaller — to purchase or construct a home, farm or other real estate; or a guarantee of a loan — not to exceed 50 percent of the loan or $2,000, whichever is smaller — to purchase machinery, equipment, and inventories, and to provide working capital; or a prorated portion of either of these amounts for loans of both types or a combination thereof. The loans must carry a rate of interest not over 4 percent. Farm real estate loans must mature in not more than 40 years, home real estate loans in not more than 25 years, and non-real estate loans in not more than 10 years. Lenders may be persons, associations, corporations, or governmental agencies, which presumably include every agency of business credit supply. The loan guarantees under the "GI Bill of Rights" may supplement insurance or guarantees of loans which other governmental bodies — such as the SWPC or RFC — are authorized to provide.

WARTIME SHIFTS IN THE RELATIONS BETWEEN BUSINESS CREDIT INSTITUTIONS

The part played by government during the war years as industrial owner and producer was given more attention than its enlarged role as supplier and guarantor of credit to private enterprise. At the end of 1939 the outstanding business loans of the RFC and Federal Reserve banks amounted to less than $0.6 billion, whereas the outstanding loans to business (short-term plus long-term) of commercial banks, commercial finance companies, and insurance companies amounted to almost $18 billion (Table 19). Five years later, public agencies, including the war procurement departments, had loans outstanding of about $2.5 billion, while the business loans of the private institutions had advanced only to $20 billion.

The importance of public agencies in the business credit market is incompletely measured by outstanding loans. At mid-1945 no less than $3.7 billion of credit was available to borrowers under outstanding V loan agreements, in addition to the $1.4 billion of guaranteed credit actually in use by business. And at the same time the RFC had outstanding authorizations for loans and agreements

Table 19—Loans Outstanding to Business Enterprises by Principal Private and Public Business Financing Institutions, 1939–45
(*in millions*)

	Private Institutions			*Public Institutions*		
End of Year	Commercial Banks[a]	Insurance Companies[b]	Finance and Factoring Companies[c]	U. S. War Procurement Agencies[d]	RFC[e]	Federal Reserve Banks[f]
1939	$ 9,400	$7,767	$ 664	...	$582	$14
1940	10,097	8,438	952	$ 600	599	9
1941	11,966	9,297	1,165	800	619	10
1942	10,284	9,341	533	2,000	756	14
1943	9,983	9,378	293	2,200	761	11
1944	10,136	9,498	288	1,800	716	4
1945 (June)	9,857	[g]	[g]	1,500	551	3

[a] Commercial and industrial loans, including commercial paper bought in the open market, held by all insured banks, plus investments in industrial, railroad, and public utility bonds, plus miscellaneous items. Figures are estimated from data in *Annual Reports of Federal Deposit Insurance Corporation.*

[b] Railroad, public utility, and industrial corporation bonds held by 49 principal legal reserve life insurance companies holding over 90 percent of total assets of all life companies. Based on data from *Proceedings of Annual Convention of the Association of Life Insurance Presidents.*

[c] Loans and advances outstanding to business enterprises by selected commercial finance and factoring companies. Estimates of National Bureau of Economic Research, Financial Research Program.

[d] Advances and prepayments on government contracts. From Securities and Exchange Commission, Statistical Series, Release No. 755, November 7, 1945.

[e] Includes the following RFC classifications: loans to railroads, loans to fisheries, mining and smelting (both "to aid in national defense" and "except to aid in national defense"), and loans to business enterprises, purchases of participations, and agreements to purchase participations (both "to aid in national defense" and "except to aid in national defense"). From reports of the Reconstruction Finance Corporation.

[f] *Federal Reserve Bulletin.* Outstandings on December 31, 1945 amounted to $2 million.

[g] Data not available.

to purchase participations in loans amounting to $0.3 billion. If it were possible to divide the total risks of business credit between those carried by public and by private institutions, the portion carried by public agencies would be considerably larger than is suggested by Table 19.

Changes in the relationships among federal business credit institutions after 1939 were marked. By the end of 1944 the RFC and the SWPC had emerged as the important wartime lenders to "marginal" businesses. The role of the Federal Reserve banks as direct lenders in the wartime financing of business was insignificant, but their services as intermediaries in arranging V, VT, and T loans were considerable.[25] Conceivably, the Federal Reserve banks could have developed into significant direct sources of working capital for concerns in war work; but other methods of current financing, especially V loans, advance and progress payments by federal procurement agencies, and the RFC and SWPC loans satisfied the demand.

So far as the legal authority to lend money to business was concerned, there was duplication between the RFC defense loan powers and those of the SWPC. The SWPC received a mandate from Congress to assist small business, but early in 1942 the RFC also began to use its loan powers more intensively to spread war work among smaller producers. On February 19 of that year the district officers of the RFC were authorized to approve loans up to $100,000 (up to $250,000 if there was participation by a bank) on their own responsibility without reference to Washington.[26] In operation, the SWPC and the RFC nevertheless differentiated their functions in the following ways:

First, the SWPC loan program served businesses smaller than those served by V loans or RFC defense loans. The average amount of all loans authorized by SWPC up to early 1944 was $74,000,

[25] During the five years ending December 31, 1944, the outstanding loans of Federal Reserve banks decreased by $9.8 million. During the whole period only 700 applications were approved for loans totaling $337 million. See *Federal Reserve Bulletin*, May 1945, p. 443.

[26] *Report of the Secretary of Commerce Covering the Activities of the Reconstruction Finance Corporation and Its Subsidiaries in Connection with the War, as of October 31, 1942*, pp. 31–32. Up to October 31, 1942 some 2,908 of these smaller loans amounting to $75 million had been approved by loan agency managers, including 2,534 loans for the manufacture of products essential to the war effort.

compared with $1,265,000 for V loans and $340,000 for RFC defense loans.[27]

Second, as a group SWPC loans carried larger risks than V loans or RFC defense loans. This resulted from the determined effort of the SWPC to aid smaller enterprises, and from its announced policy not to advance funds to applicants unless they had been unsuccessful in obtaining them from other sources.

Third, a larger fraction of SWPC loans was used to provide working capital, and smaller fractions to acquire fixed assets or to retire debt, than was true of the other types of loans.

Within the realm of private finance, the war years witnessed a decline of the commercial finance company and a rise of the life insurance company relative to the commercial bank. The larger life insurance companies steadily increased their holdings of the marketable long-term bonds and notes of business, and they expanded further their term loans and private purchases of debt securities. At the end of 1944 life insurance companies occupied a more prominent position than ever in the business credit market.

The importance of commercial finance companies as sources of credit diminished sharply after 1941. In 1940 and 1941 their outstanding loans rose rapidly, especially those arising out of the financing of instalment sales of consumer durable goods. Beginning in 1942 finance company loans were repaid as the production and distribution of consumer goods declined, consumer instalment credit contracted, and new sources of funds opened up for concerns engaged in war production. Many marginal enterprises, formerly financed by commercial finance companies, were able to win independence of outside aid as a result of large wartime earnings. Other small business clients discontinued operations. The outstanding loans of a sample of large commercial finance companies were cut by more than three-fourths between the end of 1941 and the end of 1944. Pressed with idle funds, commercial finance companies purchased government securities and some of them acquired manufacturing and other ventures, so that their function and character underwent substantial modification. After 1941 a severe re-

[27] Figures relate to loans authorized and not amounts disbursed. See *Federal Reserve Bulletin*, May 1944, p. 459; also Report of the RFC to Congress, covering operations from February 2, 1932 to March 31, 1944 (mimeographed), which indicates that defense loans and participations amounting to $1,230 million had been made to 3,621 business concerns.

duction occurred also in the outstanding consumer loans of industrial banking companies, including the Morris Plan banks. Consequently there was a more intense cultivation of the market for business credit by industrial banking companies.

Factoring concerns, purchasing business accounts receivable without recourse, sustained the volume of their operations more completely during the war years than did commercial finance companies. The explanation is that their business consisted largely of the financing of textile concerns, which continued to require external financing, whereas the commercial finance companies were heavily dependent on the acquisition of instalment receivables arising from the sales of consumer durable goods.

Part IV

EMERGING ROLE OF COMMERCIAL BANKS AS AGENCIES OF BUSINESS FINANCE

Chapter 8

EMERGING ROLE OF COMMERCIAL BANKS AS AGENCIES OF BUSINESS FINANCE

WHAT DO TWENTIETH CENTURY developments in the relations between business enterprises and commercial banks, as reviewed in the preceding chapters, imply for the functioning of commercial banks as business financing agencies? Do the developments reflect the operation of underlying forces tending to weaken the demand for the business financing services of banks? How may the future economic environment of business and banking shape business credit demands and the ability of banks to satisfy those demands? As a first step in answering these questions, the major developments in the relations between business enterprises and commercial banks may be summarized as follows:

1. Throughout the twentieth century, small and medium-sized businesses have been the major users of bank loan credit.

2. Up to 1920 business debt owed to banks increased as a fraction of the total funds used by business, but thereafter it fell in relative importance until 1935.

3. Between 1920 and 1935, and especially after 1929, the importance of current assets among total business assets decreased, thus weakening the demand for short-term loans.

4. The ratio of bank earnings on loans to business and holdings of corporate securities to total bank earnings remained relatively stable until 1929, after which it declined.

5. Bank holdings of corporate securities increased during the twenties and bank loans to business remained about constant, two changes that combined to produce a moderate lengthening of the average maturity of bank credit to business; during the thirties the growth of term lending produced a further lengthening of average maturity.

6. In the thirties business obtained its medium- and long-term

credit from banks and other financial institutions increasingly on a direct negotiation basis, thereby decreasing its use of investment banking and securities markets facilities and bringing these agencies and commercial banks into closer competition.

7. After 1930 the importance of commercial banks as suppliers of credit to business declined relative to that of life insurance companies, commercial finance companies, and government business loan agencies.

8. Commercial banks made certain significant adaptations in their business lending policies and practices after 1933. The most important were the extension of longer-term credits and of specially secured short- and medium-term loans to small and medium-sized concerns presenting higher-than-average risks.

9. During the thirties government began to play an increasingly important role in the business credit market through direct lending and through cooperative programs designed to accomplish the joint assumption, with private agencies, of credit risks. These developments were markedly accelerated during World War II.

10. Throughout the period studied bank credit of different kinds was highly substitutable; consequently, much credit not advanced directly to business enterprises flowed into the productive system in such a way as ultimately to affect the credit demands of business. Thus, during the twenties loans on securities provided, in part, funds to finance the operations of business concerns; the unprecedented growth of consumer instalment sales credit following World War I resulted in a partial replacement of accounts receivable by cash on the books of manufacturing and trading concerns; and vast sums borrowed by the federal government from commercial banks during World War II were used to provide plant facilities and working capital for businesses directly for war production, and indirectly for civilian production.

POSTWAR CREDIT DEMANDS

The amount of credit demanded by business from commercial banks and other financing agencies is at all times the resultant of a number of forces, not easily enumerated and even less easily weighed. Nevertheless, it is possible to point to the principal factors which determine aggregate credit demand, particularly if the distinction is made between those factors to which business credit demands are

subject over the short run, and those that act upon business credit demands over the long run.

Short-Run Factors Affecting Business Credit Demands

No attempt is made here to present a quantitative estimate of the volume of commercial bank loans to business during the postwar transition. Any such estimate requires assumptions regarding business liquidity, the trend of prices, the amount of operating losses that businesses may sustain during this period, federal tax policies, and numerous other factors. Several equally plausible assumptions can be made about each factor, with enormous differences in the resulting estimate of commercial loan demand. However, it is possible to identify certain factors that can influence the business credit market in the transition period, and to classify these as contractive or expansive of business demands for credit.

1. *Contractive Factors* — Certain major factors, such as those indicated below, may operate to contract, or to prevent a material expansion of, the demands of business enterprises for bank credit during the postwar transition.[1]

(a) Large cash balances and holdings of federal securities. During the four years 1941–44 the annual gain in liquid assets of corporations averaged between $7 billion and $8 billion, and that of net working capital, between $4 billion and $5 billion.

(b) Government receivables. Under the Contract Settlement Act of 1944, payments on government receivables have been made promptly on the termination of war production contracts.

(c) Refunds of excess profits taxes,[2] carry-backs of net operating losses,[3] and, possibly, tax reductions. Refunds constitute a positive source of funds; other tax adjustments may release funds that would otherwise be paid out to government.

(d) The recapture by war contractors of amounts equal to the unamortized emergency plant facilities not needed for war contract work, or recomputation of depreciation over a longer time period.

(e) Price deflation. Price reductions associated with declining

[1] This analysis draws on the findings of an investigation by Wilson F. Payne, National Bureau of Economic Research, Financial Research Program.

[2] Revenue Act of 1942, Sec. 250. (Net postwar refunds for 1942 amounted to $545 million, and for 1943, to $902 million. See U. S. Treasury Department, Press Releases 44–54, December 31, 1944, and V–229, February 25, 1946.) Recoveries under Section 722 of the Act may also figure in claims.

[3] Revenue Act of 1939, Sec. 122.

business investment substantially reduce business loan demands. Even if accompanied by high productive activity, lower prices permit a given expansion in fixed and current assets to be financed with smaller dollar outlays.

2. *Expansive Factors* — Factors such as the following may tend to expand, or to prevent any contraction of, business demand for bank credit during the transition period.

(a) Outlays of cash in connection with expenditures for deferred maintenance, deferred replacement of equipment, the rebuilding of production and sales organizations, inventory increases, and credit extensions to customers. Some concerns may find these outlays negligible while others may find them so substantial as to give rise to an excess of cash outflow over cash inflow and a consequent reduction of liquidity. The liquid assets of concerns not affected by this excess of cash outflow will not generally be available to offset the cash deficits of other businesses.

(b) Outlays to finance an expansion of the physical volume of production beyond the prewar level. If a satisfactory level of employment is achieved during the replenishment process, the physical volume of production could be from 40 to 50 percent above that of 1940. Business concerns would then face the need of providing plant and working capital to sustain such a volume of civilian production. Under conditions of business expansion, a considerable amount of newly constructed plant and equipment would be called for, especially in such lines as soft goods manufacturing, trade, and service industries, the enlargement and improvement of whose facilities were checked during the war.

The growth in the working capital requirements of business may be crudely gauged by assuming that the current assets of business would expand proportionately to the increase in the volume of business transacted. If the physical volume of production should be 50 percent above that of 1940, the $55 billion of current assets possessed by all American corporations, excluding banks and insurance companies, at the end of 1939 would have to be larger by $27.5 billion (in 1940 prices) to provide the additional liquidity, inventories, and receivables that business would demand. The importance of funds for rebuilding nonwar inventories and customer credits is very great, but an estimate of the amount of funds needed for these purposes is difficult to make because of the possibility of changed

trade credit terms, new methods of utilizing inventories, and other factors.

(c) Industrial readjustments caused by the war. The war hastened technological progress, raised somewhat the rate of obsolescence, and in some instances rendered whole productive arrangements out-of-date. In addition, shifts in population and in the regional distribution of industry may call for substantial new investment in the utilities, transportation, service, and construction industries.

(d) Credit to finance a revival of foreign commerce and foreign investment. Foreign demands may be present for all types of goods, especially raw materials and industrial equipment. Some part of these demands may be financed by long-term reconstruction loans by government agencies, but a margin — perhaps substantial in size — may be financed by private lending agencies on short term and long term.

(e) Outlays made by newly-established enterprises. Bank credit has probably always played a small part in the financing of strictly new, as distinguished from established, enterprises, but it may play a significant part during the transition period as a result of the government loan guarantees available to veterans under the Servicemen's Readjustment Act of 1944. Many new businesses, which would otherwise be started by demobilized servicemen with the exclusive aid of relatives and friends, may utilize bank credit as a result of such guarantees.

(f) Price inflation. Price inflation increases the value of current assets necessary for a given expansion in physical output, without improving the quality of those assets. It raises profit expectations, invites over-investment and speculation in inventory, and encourages short-term borrowing.

The possibility that the business economy might require additional accommodation from banks during the postwar transition, suggested by these considerations, has been borne out by the increase in commercial and industrial loans after mid-1945.

Long-Run Factors Affecting Business Credit Demands

The record of the twentieth century indicates that in the long run the amount of bank credit demanded by business is strongly affected by such broad factors as the following:

1. The rate of expansion of the total assets of business enterprises. A small increase in business assets can be financed largely by retained earnings; when asset expansion is substantial, business managements look to outside sources for funds, thus raising the potential demand for bank credit. Within a limited period of time, the movement of total business assets is closely associated with changes in gross national product. Over a longer period, a tendency for government to expand its relative share in national product means an absolute change in business assets smaller than would otherwise have occurred.

2. Self-financing among business concerns. The ability and willingness of a concern to finance the expansion of its assets through the retention of earnings clearly determines, given a rate of asset expansion, the concern's demand for external funds. While there is a widespread impression that business management relies increasingly on self-financing, there is no convincing evidence that this has been true for manufacturing and trade concerns. As pointed out previously,[4] the annual rate of total asset expansion varies considerably more than the rate of retained earnings, with the result that outside funds are needed mainly in years in which asset expansion rates are high or increasing rapidly. For years in which rates of asset expansion have been comparable, there has been no observable tendency for the proportion of funds provided from outside the business to diminish.[5]

3. The propensity of business management to rely on ownership rather than on credit funds. This propensity is revealed by the preponderance of equity funds in all samples of corporate balance sheets over the entire period studied, and is of great importance for commercial banks, because for reasons of prudence the law does not permit them to supply equity funds to business.

4. The propensity of business management of large corporations to use increasing amounts of long-term credit relative to short-term credit. This tendency was unquestionably strong after 1920, and especially after 1933; underlying it was a desire to avoid loss of

[4] See Chapter 3, pp. 92–96.

[5] If a larger fraction of the increments in business assets were to be financed with retained earnings, this would require (1) that the rate of asset expansion diminish, (2) that profit rates increase, (3) that smaller fractions of profits be disbursed in cash or property, or (4) that two or more of these factors operate simultaneously. In fact, between 1920 and 1940 profit rates showed a downward drift and there was little secular change in the fraction of net earnings distributed.

capital and control through default on short-term loans falling due in periods of sharp business contraction. The increasing prominence of fixed assets in the productive process, and the instability of business conditions, also have been factors emphasizing the use of long-term credit. Whether the use of such credit has been as characteristic of small and medium-sized concerns as it has been of large concerns is open to question, but even where it might have been preferred among businesses of small size its availability has heretofore been limited.

If, in the long run, the rate of expansion in the dollar value of business assets is high, and if prewar business financing practices persist, there will be a strong demand for bank credit, particularly medium- and long-term credit in the form of term loans and corporate debt securities. A considerable proportion of this credit will continue to carry appreciable risks.

FACTORS LIMITING COMMERCIAL BANK ADAPTATIONS

Certain features of American commercial banking and of the environment in which it operates have definitely impeded adaptations to long-run changes in the demands for funds by business concerns, and have restrained banks from taking risks in business financing. Unless these impediments can be removed or surmounted, further development of bank relationships with businesses may be handicapped. If banks are to perform a significant business financing function, their operations must be geared to the credit demands of the market, which the evidence of this study indicates have been increasingly for loans of medium and long term and for loans to small and medium-sized businesses often entailing high costs of loan administration and higher-than-average risk exposure.

Some of the limiting factors which will now be considered are related to the nature of the commercial banking system, and others to the scheme of public regulation that has grown up around it.

Business Fluctuations

Because of its long exposure to the hazards of general economic instability, bank lending is conducted on the assumption that a degree

of instability will continue to characterize the economy. The disposition to assume ordinary risks of shifts in industrial demand and cost conditions would be greater if the risks of sharp cyclical fluctuations in the economy as a whole were reduced. The importance of this factor is clearly heightened by a tendency for the credit needs of business to involve loans of medium and long term to maturity.

Low Ratio of Capital to Total Liabilities

The fact that the commercial bank operates with a far smaller cushion of equity than do other types of business financing institutions accounts in part for the greater selectivity of risks by banks, and tends to limit banking operations to the more conventional lines. The ratio of capital to total liabilities for national banks fell from 34 percent in 1865, to 20 percent in 1900, 9 percent in 1940, and 6 percent in 1944. The six principal commercial finance companies, in contrast, at the end of 1941 had ratios varying from 15 percent to 22 percent, and these ratios tended to rise during the war years.

Short-Term Nature and Instability of Deposit Liabilities

The deposit liabilities of banks are short term and of unstable character, and they are to a considerable degree beyond the control of bank management. Banks, owing large sums to the public payable on demand or short notice, seek to acquire a set of assets that will enable them to meet their liabilities under all foreseeable conditions. The asset structure of commercial and industrial enterprises, in contrast, is broadly determined by their production technology; the major financial problem of these concerns is that of choosing an appropriate structure of liabilities.

At mid-1945 commercial banks had by far the largest volume of deposits in history. Barring a rapid reduction in outstanding federal debt, the total amount of deposits held by the banking system will probably not diminish. It might even increase as a result of a return to the banks of currency in circulation and bank purchases of federal securities from the public. Yet the amount and composition of deposits of many individual banks are likely to be highly unstable, because of population movements, basic regional shifts in the location of industry, and transfers of deposits between consumers and

business enterprises. Under these conditions banks will continue to give attention to the maturities of their assets. Concern over the extended maturity of term loans certainly has been a factor limiting the willingness of commercial banks to undertake this type of lending.

It may be argued that commercial banks, in acquiring loans or investments, need not be concerned about the composition and stability of their deposit liabilities, because they can always have recourse to the Federal Reserve banks for funds in the event that deposits are withdrawn in unexpectedly large amounts. Term loans to business enterprises may, for example, be used by commercial banks as a basis for borrowing from a Federal Reserve bank. But American commercial banks are generally averse to borrowing at a central bank, because of cost, concern over their credit position, and tradition. For these reasons the accumulation of earning assets by banks has been, and will continue to be, influenced by the maturity and other features of their deposit liabilities.

Risk Quality of Bank Assets Other Than Business Loans

Ordinarily a bank is able to accept more risk and longer maturities on its business loans, the higher the quality and the shorter the maturities of its other loans. It is clear that for many years following World War II loans to government will be the principal earning asset of American banks. The preponderance of federal securities in bank portfolios raises the question of the extent to which banks are exposed to risk in carrying these assets. The Board of Governors of the Federal Reserve System implied that government securities may be regarded as "riskless" assets by bank managements, when it pointed out that the large growth in bank liabilities since 1941 was accompanied by a growth in assets involving "no risk of loss."[6] If commercial bank holdings of government securities continue to be free from risk, they must be immediately salable in unlimited quantities without loss. If the official policy of the federal fiscal and monetary agencies should be to give long-term unqualified support to the price of government securities, important implications for business lending operations would follow. Bankers would then consider themselves able to extend loans of longer maturities and to

[6] *Thirtieth Annual Report of the Board of Governors of the Federal Reserve System*, 1943, p. 30.

take greater business loan risks than would be true if they should face the possibility of market depreciation of their large holdings of government securities. Conversely, a definite withdrawal of support would, among other consequences, lead to a more cautious attitude toward business lending.

Regulation of Bank Investments

Both law and administrative regulation have restricted bank financing of business through the purchase of debt securities. The National Bank Act of 1863 was silent on the subject of bank investment, with two exceptions: it required that a national bank purchase government bonds as collateral for its circulating notes; and it limited the liabilities of a single obligor for money borrowed to a stated percent of the paid-in capital of the bank. Later, under an interpretation of the National Bank Act by the Comptroller of the Currency, national banks were permitted to purchase corporate and other bonds, and in 1927 they were given specific statutory authorization to make such investments. As a result of the Banking Acts of 1933 and 1935 banks were required to abstain from underwriting security issues through affiliated companies, from wholesaling securities, and from holding the obligations of any one obligor in amounts exceeding 10 percent of their capital and surplus account.

Equally effective in limiting bank participation in business financing through the purchase of debt securities were the regulations of the Comptroller of the Currency in regard to the valuation of investments by bank examiners. Up to 1936 for national banks, and to 1938 for state banks, security holdings were valued by examiners at market prices, and deficiencies of market price under cost were viewed as "estimated losses," which were required to be written off the books of the bank. In 1938 a joint agreement of federal and state bank supervisory agencies modified this practice by providing that "investment grade" securities be valued at cost, and other securities not in default be valued at average market prices during the preceding eighteen months. "Investment grade" securities are defined by three classifications: those placed in the four highest groups by recognized rating services; bonds rated below these four groups but viewed by the examiner as of investment quality; and unrated securities of equivalent grade. Unrated bonds on which inadequate bank credit information prevents determination of quality are not,

in general, adjudged of investment grade — a procedure that places a premium on bank investment in better-known and well-rated securities of large concerns. While banks are not prohibited from buying the unrated securities of small or less well-known businesses, they are required to maintain credit files containing adequate information for the appraisal of such bonds as to investment quality. The maintenance of such files necessarily involves considerable cost and inconvenience.

Examination of Bank Loan Portfolios

Public supervisory authorities and bank officers agree that examination of bank loan portfolios has affected the readiness of commercial banks to make innovations in their business lending policies, particularly as regards term lending, or to engage in special types of business lending involving higher-than-average risks.

Traditionally, the practice of bank examiners was to place, or "classify," loans subject to criticism in "slow," "doubtful," or "estimated loss" classes. Up to 1934 it was not unusual for a bank examiner to classify all loans maturing in more than one year as "slow." At a joint examiners' conference called by the Secretary of the Treasury in that year it was agreed that the term "slow" would not be applied to loans which were reasonably certain of ultimate repayment "by reason of the sound net worth of the maker and/or endorser, even though their assets or a large part thereof may not be of a liquid nature under present conditions . . ."[7] It was further agreed that collateral loans would not be classified as "slow" as long as the collateral had "sound intrinsic value" even though it was not salable at the time. In 1938 a further step was taken to remove any unfavorable stigma from intermediate- and long-term loans. The bank supervisory agencies agreed to place all uncriticized loans in Class I, and to classify all criticized loans in classes designated II, III, and IV, dropping altogether the categories "slow," "doubtful," and "loss," the first category being dropped because of its "improper emphasis on maturity."[8] The new procedure placed major emphasis on the earning capacity of the borrower and endorser, and less emphasis upon the immediate value of the borrower's liquid assets or collateral. Despite these changes, it was stated as

[7] *Annual Report of the Federal Deposit Insurance Corporation*, 1938, p. 62.
[8] *Ibid.*, p. 63.

late as April 1941 that confusion still existed as to the new examination procedure and that some examiners "still criticize capital loans and, to a lesser degree, real estate and other long-term loans."[9]

Usury Laws

Last of the significant factors that have limited the functional flexibility of commercial banks is the fact that maximum interest rates exist with respect to lending activity. These limitations are imposed by the usury laws, and they also grow out of the reluctance of banks to lend money — even where law would permit — at rates in excess of "standard" or "conventional" bank rates. While some banks charge service fees or employ other measures to raise the gross income return, especially on small loans and on those which, due to higher-than-average risk exposure, involve special costs of administration, other banks, uncertain of their legal position, have held back from accepting loans in which the circumstances called for higher gross charges than were consistent with legal maximum rate regulation.

A maximum charge, whether fixed by law or convention, clearly acts as a restraint on lending under conditions of relatively high risk or high cost of loan administration. Such maxima unquestionably have retarded the readiness of banks to undertake certain of the newer forms of collateralized business lending or to make small term loans.

ADJUSTMENTS IN BANK LENDING POLICIES AND PRACTICES

Commercial banks have made several adjustments to the changing structure of the business credit market and to the changing needs of businesses for credit. One adjustment has been "constructive lending" — that is, extending the application of credit survey techniques to small and medium-sized business concerns, actively seeking out promising managements, and taking a positive attitude toward the formulation of financing programs designed to meet specialized needs. Other adjustments involve the more extensive use of corre-

[9] *The Answers of the American Bankers Association,* in Reply to a Questionnaire of the United States Senate Committee on Banking and Currency (New York, April 1941) p. 42.

spondent relationships in assuming business credit risks, and cooperative action with public lending and loan-guaranteeing agencies.

Constructive Lending

The increasing complexity of business operations poses serious problems for the small and medium-sized concerns that comprise the bulk of the market for bank business credit. In such businesses the principals are often specialists in but one field of management, such as engineering, marketing, or production, and they may not be well qualified to formulate policies and supervise practices in other fields. The small size of such concerns makes it difficult for them to possess all types of managerial talent, and therefore the services they require of financial institutions include business counsel as well as credit.

The association of management counsel with credit advances was particularly noteworthy in the operations of commercial finance companies during the thirties. Some finance companies had separate counseling organizations, and for the services of these organizations they charged fees in addition to loan charges. The ability to render counseling service, especially to small concerns with inadequate managerial staffs and relatively weak financial standing, made it possible to make loans that were not otherwise feasible and to protect the interest of the financial agency in such loans. Among commercial banks it has long been customary to give informal counsel to business customers, and recently some banks have organized departments for this purpose.

Part of the task of meeting more adequately the financial needs of small and medium-sized concerns is the formulation and introduction of lending programs specially designed to meet these business needs without sacrifice of reasonable margins of safety, and the administration of such programs within manageable ranges of operating costs. Surveys of business credit demand are often undertaken in connection with these programs, since their success may hinge on the acquisition of a volume of lending of a given type sufficient to support the administrative outlays associated with specialized financing procedures. Such analyses of the market for bank credit, to determine the amount and character of the financing services demanded by business, and constant alertness to the needs of individ-

ual customers will continue to be essentials of constructive lending operations.

Correspondent Relationships

Correspondent relationships, which have always facilitated cooperative action among banks, have recently been adapted to serve more effectively the business financing activities of commercial banks. The adaptations have taken several forms, one of which is the wider use of participatory arrangements to provide financing facilities for large enterprises in industry and trade. Arrangements of this type may be carried on within a given network of correspondent relationships, or they may involve the joint participation of several correspondent systems. It is customary in such participations for the lead to be taken by the larger institutions.

Of special interest to this study are participations in which the loan originates in a small institution and, because of its size, complexity, or other factors, is turned over in part to a neighboring institution or to one in a larger money market. In certain cases the cooperating bank may, by virtue of its experience and specialized personnel, play an important part in formulating the loan agreement. Participatory arrangements of this type make it possible for a unit banking system to operate, where such operation is essential, with the conveniences and capacities of a regional or national financing system.

A second important adaptation of correspondent banking relationships relates to the provision of financing facilities for small and medium-sized concerns requiring specialized types of credit because of the relatively high risks involved. In such instances correspondent relationships are useful in making available to associated banks, especially those of small size, the skills and techniques developed in the specialized departments of other banks, and in sharing with correspondent institutions the experience of specialized lending operations. While these participations often consist primarily of sharing information on procedures, practices, and experience, they are sometimes extended to the cooperative assumption of risks on loans which, for various reasons, an individual bank wishes to share with other lenders.

A third general line along which correspondent banking rela-

tionships are being developed is that in which a given bank makes arrangements with a manufacturer of consumer durable goods, or of commercial and industrial equipment, for the financing of sales, usually on instalment terms, within a given region through a system of specially selected associated banks. This is again a means of giving to a system of independent banks the advantages of a regional or national organization.

Finally, special mention should be made of the regional credit pools organized under the sponsorship of the Small Business Credit Commission of the American Bankers Association. The plan involves the establishment of a pool of credit to which banks in a region can subscribe. The pool will take all or part of any loan which a local bank considers itself unable to make, either because of the size of the loan or because some feature, such as the term to maturity, involves risks that the individual institution prefers not to assume alone. By early 1946 forty-eight regional bank credit groups had been formed with about $670 million pledged to aid in financing medium and small businesses.

Government Business Lending and Loan Guaranteeing Agencies

The development described above as "constructive lending" involves independent action by individual banks in adapting their lending policies and practices to changing credit demand conditions. In contrast, the development of new ways in which correspondent bank relations can be made to serve more effectively in the conduct of business and consumer financing requires the joint or collective action, within the framework of independent banking, of a group of banks. Adjustments have also taken place at a third level, involving the cooperative action of public and private agencies.

It has been pointed out previously[10] that, where existing banking facilities are unable to meet particular credit demands, a public agency may function as a direct lender, carrying the full amount of the loan involved. Public agencies also participate in loans of commercial banks, or make commitments to take up all or part of a loan made by an individual institution, if the latter institution decides at some point that it wishes to dispose of the loan. Public agen-

[10] Chapter 4, pp. 121 ff., and Chapter 7, pp. 187 ff.

cies guarantee loans made by banks. Finally, public agencies help to introduce new lending methods and facilitate the wider application of techniques of lending specially designed for small and medium-sized enterprises presenting relatively high risks.

Prior to World War II these several devices were used by the Reconstruction Finance Corporation, the Federal Reserve banks, and the Export-Import Bank of Washington; during the war they were extended to the Smaller War Plants Corporation and, in the case of the loan guarantee, to all the government procurement agencies. Under the Servicemen's Readjustment Act of 1944 government loan guarantees of potentially vast funds are available, while the International Bank for Reconstruction and Development extends the principle of government guarantee to foreign investment. On August 24, 1944 Chairman Eccles of the Board of Governors of the Federal Reserve System proposed legislation to extend the V loan principle to postwar business loans of all kinds; this would be accomplished by authorizing a member bank to apply to the Federal Reserve bank of its district for a guarantee up to 90 percent of the amount of any loan made to a business concern for any purpose.

The development of government lending and loan-guaranteeing operations is readily explained by the economic instability and uncertainty that characterized the period of the thirties, and by the special credit problems involved in business financing during World War II. While these techniques undoubtedly aided banks to adjust themselves to new conditions in the business credit market, they raise questions concerning the future position of banking. This is particularly true of the use of loan guarantees. Clearly, if loan guarantees are developed to the point where government carries the risk of virtually all business credit, then the commercial bank is left only with the clerical task of loan administration. Business would depend for the conduct of its operations upon the availability of what would, to all intents and purposes, be public credit. Unlike the other adaptations considered above, public loan guarantees in the long run entail a constriction of the independent business financing function of the banks.[11]

[11] The problems inherent in this development have been stated in the *Annual Report of the Federal Deposit Insurance Corporation*, 1943, p. 13: "Assumption by the Government of the risks inherent in credit extension by privately owned financial institutions

FUTURE RELATIONSHIPS BETWEEN BUSINESS ENTERPRISES AND COMMERCIAL BANKS

The primary purpose of this study has been to trace and explain the development since 1900 of the relationships that exist between commercial banks and business enterprises. The study was originally suggested by a basic question confronting the commercial banking system: Are the business financing functions of commercial banks undergoing gradual decline?

The evidence clearly shows that while the manner in which commercial banks perform business financing functions has changed considerably in the last 25 years, and while the bank credit used by business during the thirties was far less, absolutely and relatively, than the credit used during the twenties and earlier, there is no reason to believe that in the calculable future the business financing functions of banks will be of less importance than at present. On the contrary, the evidence shows that the adaptations made by banks in their business financing practices enabled them, during the revival years of the thirties, to play a more important role in the business credit market than they did during the early thirties. Whatever may have happened in the second half of the thirties in the proportion of business loan assets to other assets of banks, it is clear that there was a revival in the absolute amount of bank credit used by business.

That revival can be attributed in part to changed conditions in the total demand for funds by business enterprise, traceable ultimately to a higher rate of business asset expansion. But it was brought about also by adaptations which commercial banks began to make in their business lending policies and practices. A willingness to risk funds on long term reestablished their position in the financing of large concerns. The development of lending techniques more appropriate to the needs of the small and medium-sized business concerns, which have traditionally constituted the bulk of the banks' market for business credit, brought banks into broader contact with this part of the business community. The revival of busi-

to private business enterprise would reduce the chances of continuation of banking and business under private ownership and control. In order to avoid excessive loss the guarantor, an agency of the Federal Government, would have to set standards and review each individual loan transaction. In effect, the guarantor would determine who could and who could not have credit, as well as the channels through which such credit would be obtained."

ness lending by commercial banks was facilitated by certain changes in public laws and regulations affecting these institutions; among these were the liberalization of rediscount facilities, the revision of bank examination procedures, and the action of public agencies engaged in direct business lending and in loan insurance.

The business financing function of commercial banks might well decline if banks should confine their operating practices and policies to those characteristic of the first three decades of the century. Recent developments strongly suggest, however, that if the business economy continues to experience growth, if banks make the adaptations which are within their power, and if the environment of public law and regulation within which banks operate is conducive to risk taking, there will be no decline in the demand for their business financing services.

Appendix

PART I — SOURCES OF DATA FOR CHARTS

Summary

Chart: Estimates of National Bureau of Economic Research, Financial Research Program, based on data from *Annual Reports of the Comptroller of the Currency*

Chapter 1

Chart 1: Estimates of National Bureau of Economic Research, Financial Research Program

Chart 2: William Leonard Crum, *Corporate Size and Earning Power* (Cambridge, Mass., 1939) p. 31

Charts 3, 4, 5: Based on data in U. S. Treasury Department, *Statistics of Income for 1939*, Part 2

Chapter 2

Charts 6, 8: Carl Kaysen, *Industrial and Commercial Debt—A Balance Sheet Analysis, 1939* (National Bureau of Economic Research, Financial Research Program, ms. 1942) Table A–6. Totals are weighted averages of percentages for the five divisions.

Chart 7: Based on tabulations in Carl Kaysen, *op. cit.*, p. 26

Chart 9: Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942) Table C–3, p. 154

Chart 10: *Ibid.*, Table C–2, p. 152

Chart 11: Estimates of National Bureau of Economic Research, Financial Research Program, covering both corporate and noncorporate businesses

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Chart 12: Simon Kuznets, *National Income and Its Composition, 1919–1938*, Vol. I (National Bureau of Economic Research, 1941) p. 164

Chart 13: Data for manufacturing industries are from Solomon Fabricant, *The Output of Manufacturing Industries, 1899–1937* (National Bureau of Economic Research, 1940) p. 83; notes payable ratios are calculations of the National Bureau of Economic Research, Financial Research Program, from compilations in U. S. Treasury Department, *Statistics of Income for 1937*, Part 2

Chart 14: Records of National Bureau of Economic Research, Financial Research Program, Corporate Bond Project

Charts 15, 16, 17, 18, 19, 20: Calculations of the National Bureau of Economic Research, Financial Research Program, based on samples of corporations

Charts 21, 22, 23: Estimates of the National Bureau of Economic Research, Financial Research Program, based on data from *Annual Reports of the Comptroller of the Currency*

Chapter 4

Chart 24: *Federal Reserve Bulletin, Annual Reports of the Comptroller of the Currency, Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943), and estimates of the National Bureau of Economic Research, Financial Research Program

Chapter 6

Chart 25: Population data are from Harold Barger and Hans H. Landsberg, *American Agriculture, 1899–1939: A Study of Output, Employment and Productivity* (National Bureau of Economic Research, 1942) pp. 399–400; data on the labor force are from National Industrial Conference Board, *The Economic Almanac for 1943–44*, p. 115; the index of manufacturing output is from Solomon Fabricant, *Employment in Manufacturing, 1899–1939: An Analysis of Its Relation to the Volume of Production* (National Bureau of Economic Research, 1942) p. 331; estimates of national income are from National Industrial Conference Board, *op. cit.*, p. 361, Willford Isbell King, *The National Income and Its Purchasing Power* (National Bureau of Economic Research, 1930) p. 74, and Simon Kuznets, *National Income and Its Composition*, Vol. I (National Bureau of Economic Research, 1941) p. 137; data for national wealth are from *Statistical Abstract of the United States*, 1937, p. 295, and National Industrial Conference Board, *op. cit.*, p. 353.

Chart 26: Estimates of the amount of corporate bonds outstanding

were made by the National Bureau of Economic Research, Financial Research Program, Corporate Bond Project; data on net private short-term debt are from *Survey of Current Business*, July 1944, p. 16; total assets of commercial banks are estimates of the National Bureau of Economic Research, Financial Research Program, based on *Annual Reports of the Comptroller of the Currency;* and number of commercial banks is from *Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943) p. 6.

Chart 27: Capital assets per wage earner are from Solomon Fabricant, *Employment in Manufacturing, 1899–1939: An Analysis of Its Relation to the Volume of Production* (National Bureau of Economic Research, 1942) p. 95; notes payable ratios are calculations of National Bureau of Economic Research, Financial Research Program, based on data in U. S. Treasury Department, *Statistics of Income for 1937*, Part 2

Chart 28: William H. Shaw, *Finished Commodities Since 1879: Output and Its Composition* (National Bureau of Economic Research, Occasional Paper 3, August 1941) pp. 5–6

Chart 29: Simon Kuznets, *Commodity Flow and Capital Formation*, Vol. I (National Bureau of Economic Research, 1938) p. 487; Simon Kuznets, *Commodity Flow and Capital Formation in the Recent Recovery and Decline, 1932–1938* (National Bureau of Economic Research, Bulletin 74, 1939) p. 2; estimates of National Bureau of Economic Research, Financial Research Program, based on *Annual Reports of the Comptroller of the Currency* and *Annual Reports of the Treasury Department*

Chart 30: *Banking and Monetary Statistics* (Board of Governors of the Federal Reserve System, 1943) pp. 264–65

Chapter 7

Charts 31, 32: Securities and Exchange Commission, Statistical Series, Release No. 758 (February 13, 1946)

Chart 33: Indexes (December 1939 = 100) were computed from data in the following publications: current liabilities, Securities and Exchange Commission, Statistical Series, Release No. 758 (February 13, 1946); production (seasonally adjusted), *Federal Reserve Bulletin*, June 1943, p. 553, January 1944, p. 85, March 1946, p. 321; commercial loans, Federal Deposit Insurance Corporation, *Assets and Liabilities of Operating Insured Banks*

Appendix

PART II — SOURCES OF FIGURES IN TEXT

A. LIST OF ITEMS

In the following list, monographs are referred to by name of author only. For complete titles and dates of publication of monographs, see Part B, below.

Chapter 1

p. 23, lines 19–24: Estimates of National Bureau of Economic Research, Financial Research Program.
p. 29, lines 29–33: Based on *Statistics of Income for 1939,* Part 2.
p. 35, lines 5–7: Alexander, pp. III 14–15; Kaysen, p. 14.
p. 35, lines 10–13: Chudson, p. 15.

Chapter 2

p. 39, lines 10–19: Based on *Statistics of Income for 1939,* Part 2.
p. 39, lines 20–29: Alexander, pp. V 13–14.
p. 45, lines 1–10: Based on data in Kaysen, p. 21, and Chudson, p. 48.
p. 45, line 36 — p. 46, line 5: Chudson, p. 53.
p. 46, lines 6–9: *Federal Reserve Bulletin,* August 1942, p. 772.
p. 46, lines 23–31: Estimates of National Bureau of Economic Research, Financial Research Program.
p. 47, line 11 — p. 48, line 2: *Federal Reserve Bulletin,* September 1942, Table 9, p. 889.
p. 48, lines 23–35 — p. 49, lines 6–11: Estimates of National Bureau of Economic Research, Financial Research Program.
p. 49, line 32 — p. 50, line 4: *Federal Reserve Bulletin,* November 1942, p. 1091.
p. 50, lines 5–8: *Federal Reserve Bulletin,* November 1942, p. 1093.
p. 50, lines 9–18: Jacoby and Saulnier, *Accounts Receivable Financing,* pp. 12–13, 133; *Financing Inventory on Field Warehouse Receipts,* p. 81; *Financing Equipment for Commercial and Industrial Enterprise,* p. 80.
p. 51, lines 31–33: Estimates of National Bureau of Economic Research, Financial Research Program.

p. 52, lines 5–9: Jacoby and Saulnier, *Term Lending to Business*, pp. 3, 33.

p. 52, lines 15–17: U. S. Department of Commerce, *Indebtedness in the United States, 1929–41* (Washington, 1942) p. 41.

p. 52, lines 19–21: *Proceedings of the Thirty-Fifth Annual Convention of the Association of Life Insurance Presidents* (New York, 1941) pp. 115–17.

p. 52, lines 22–28: *Report of the Comptroller of the Currency*, 1940, p. 36; *Report of the Reconstruction Finance Corporation*, Fourth Quarter, 1940, pp. 9–10.

p. 54, lines 1–6: Chudson, p. 107.

p. 54, lines 13–15: Chudson, p. 106.

p. 58, line 13 — p. 59, line 1: Jacoby and Saulnier, *Term Lending to Business*, pp. 60, 63.

p. 60, lines 3–8: Jacoby and Saulnier, *Term Lending to Business*, pp. 57, 61, 64. The figure for Federal Reserve banks is based upon analyses made in 1935.

p. 60, lines 18–25: Jacoby and Saulnier, *Term Lending to Business*, pp. 61, 66.

p. 60, lines 26–34: Based on compilations of National Bureau of Economic Research, Financial Research Program, Corporate Bond Project.

p. 61, line 6 — p. 62, line 2: Jacoby and Saulnier, *Term Lending to Business*, pp. 58, 62, 66.

p. 62, lines 24–26: Jacoby and Saulnier, *Term Lending to Business*, pp. 107–8.

p. 65, line 10: *Report of Federal Deposit Insurance Corporation*, December 31, 1940, p. 145.

p. 68, lines 17–19: *Report of Federal Deposit Insurance Corporation*, December 31, 1940, p. 158.

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p. 71, line 23 — p. 72, line 1: Kuznets, *National Income and Capital Formation*, p. 15.

p. 74, lines 1–8: King, p. 94, and Martin, pp. 60–61.

p. 76, lines 15–17: T.N.E.C., *The Structure of Industry*, p. 10.

p. 76, lines 20–23: T.N.E.C., *Competition and Monopoly in American Industry*, p. 56.

p. 97, lines 3–6: *Report of the Comptroller of the Currency*, 1920, Vol. I, p. 31.

p. 100, lines 19–30: Tabulations of National Bureau of Economic Research, Financial Research Program.

p. 100, line 33 — p. 101, line 2: *Report of the Comptroller of the Currency,* 1913, p. 7.

p. 101, lines 24–27: *Serving Seventy Million Americans* (a report to the membership of the Life Insurance Association of America, by James A. Fulton, President, December 1, 1944) Table 1, p. 9.

p. 101, line 28 — p. 103, line 35: Based on estimates of National Bureau of Economic Research, Financial Research Program, Corporate Bond Project.

p. 104, lines 16–19: *Tenth Annual Report of the Securities and Exchange Commission,* pp. A–10 and A–11.

p. 104, lines 25–28: Based on estimates of National Bureau of Economic Research, Financial Research Program, Corporate Bond Project.

p. 104, lines 28–31: *Tenth Annual Report of the Securities and Exchange Commission,* p. A–11.

Chapter 4

p. 115, line 27 — p. 116, line 3: Dauer, pp. 44–46.

p. 119, line 37 — p. 120, line 3: *Proceedings of the Thirty-Fifth Annual Convention of the Association of Life Insurance Presidents* (New York, 1941) p. 116. Premium notes are estimated to have constituted about 5 percent of the total.

p. 123, lines 1–3, 13–16: *Report of the Reconstruction Finance Corporation,* Fourth Quarters, 1934 and 1940, Table 1.

p. 124, lines 28–34: *Federal Reserve Bulletin,* January 1946, p. 17.

p. 125, lines 7–9: *Federal Reserve Bulletin,* April 1941, p. 307.

p. 125, lines 13–16: *United States Maritime Commission Report to Congress for the Period Ended October 25, 1940,* p. 17.

p. 126, lines 2–12: *Annual Report of the Export-Import Bank of Washington for 1940,* pp. 2–3, 5.

p. 128, line 34 — p. 129, line 6: *Survey of Current Business,* July 1944, p. 16.

p. 129, lines 8–10: *Federal Reserve Bulletin,* January 1946, p. 81.

p. 129, lines 10–11: *Survey of Current Business,* July 1944, p. 16.

Chapter 5

p. 134, lines 13–18: Fiske, pp. 138–39.

p. 134, lines 28–31: Hague, p. 95.

p. 136, lines 28–31: Estimates of National Bureau of Economic Research, Financial Research Program.

p. 136, lines 31–35: Alexander, pp. II–2, III–3.

p. 141, line 36 — p. 142, line 2: Jacoby and Saulnier, *Term Lending to Business,* Table C–1, p. 151.

Chapter 6

p. 153, lines 21–24: *Statistical Abstract of the United States,* 1941, p. 6.

p. 153, line 33 — p. 154, line 3: National Industrial Conference Board, *The Economic Almanac for 1943–44,* pp. 115, 117–19.

p. 157, lines 1–5: Data are available in the *Annual Report of the Comptroller of the Currency* and cover national banks, state banks, and loan and trust companies. Estimates are necessary, from 1926–40, inclusive, to exclude stock savings bank assets from the total.

p. 158, lines 21–25: Barger and Schurr, p. 80.

p. 162, lines 1–4: Kaysen, p. 21.

p. 162, lines 5–9: *Federal Reserve Bulletin,* December 1943, p. 1193, and *Annual Report of the Federal Deposit Insurance Corporation,* 1940, pp. 144–45.

p. 162, lines 26–28: *Statistical Abstract of the United States,* 1937, p. 268.

p. 164, lines 23–28: Kuznets, *Commodity Flow and Capital Formation,* p. 2.

Chapter 7

p. 171, lines 18–25: Computed from data given in the *Treasury Bulletin,* August 1942, p. 8; September 1942, p. 8; January 1943, p. 16; December 1943, p. 17; June 1944, p. 9; March 1945, p. 7; October 1945, p. 7.

p. 172, lines 4–8: *Federal Reserve Bulletin,* October 1943, p. 1013; February 1946, p. 175.

p. 172, lines 14–18: See "National Income and National Product in 1943" by Milton Gilbert and George Jaszi, *Survey of Current Business,* April 1944, p. 6. Measured in 1939 dollars rather than current dollars, gross national product during 1943 was $155 billion. Professor Kuznets' estimates of gross national product in current dollars are lower than those of the Department of Commerce but agree closely on the percentage increase between 1900 and 1943. See Kuznets, *National Product, War and Prewar,* p. 3. Data for gross national product during 1944 and 1945 are from *Survey of Current Business,* February 1946, p. 8.

p. 172, lines 28–32: *Federal Reserve Bulletin,* April 1943, p. 288.

p. 173, lines 1–4: *Federal Reserve Bulletin,* December 1943, p. 1190.

p. 173, lines 13–16: *Federal Reserve Bulletin,* July 1946, p. 802.

p. 173, lines 24–31: *Survey of Current Business,* July 1944, p. 7; May 1946, p. 21.

p. 175, lines 33–35: *Statistics of Income for 1939*, Part 2, p. 22.
p. 177, lines 6–19: Securities and Exchange Commission, Statistical Series, Release No. 756, December 17, 1945.
p. 177, lines 20–39: Securities and Exchange Commission, Statistical Series, Release No. 758, February 13, 1946.
p. 180, line 31 — p. 181, line 30: *Ibid.*
p. 182, lines 21–28: *Federal Reserve Bulletin*, November 1945, p. 1104.
p. 183, lines 8–21: Securities and Exchange Commission, *Working Capital of 1228 Registered Corporations*, December 5, 1945, Table 1.
p. 189, lines 25–27: *Report of the Reconstruction Finance Corporation*, June 30, 1945, Table 1, p. 4.
p. 190, lines 22–23: *Federal Reserve Bulletin*, November 1945, p. 1141 and correspondence with Export-Import Bank.
p. 192, line 37 — p. 193, line 10: *Federal Reserve Bulletin*, March 1946, pp. 245–46.
p. 193, lines 21–23: *Report of the Reconstruction Finance Corporation*, June 30, 1945, Table 1, p. 4, Table 2, p. 2.
p. 194, lines 20–27: Smaller War Plants Corporation, *Eighteenth and Nineteenth Progress Reports* (April–May 1945 and June–July 1945).
p. 194, lines 28–30: *Federal Reserve Bulletin*, January 1946, p. 67.

Chapter 8

p. 205, lines 19–21: Securities and Exchange Commission, Statistical Series, Release No. 758, February 13, 1946.
p. 210, lines 11–13: *Statistical Abstract of the United States*, 1944–45, p. 334. The 1944 figure is from the *Annual Report of the Comptroller of the Currency*, 1944, p. 6.
p. 210, lines 13–15: Jacoby and Saulnier, *Accounts Receivable Financing*, p. 51.
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C. SOURCES OF DATA IN TABLES 5, 6, 7, 8

Bank-eligible corporate bonds outstanding: Compilations of the National Bureau of Economic Research, Financial Research Program, Corporate Bond Project; only publicly placed obligations are included. "Bank-eligible" bonds are those placed within the first four rating groups by a recognized rating service. See *Annual Report of the Federal Deposit Insurance Corporation,* 1938, p. 64. Data in Tables 5 and 6 are based on single-maturity fixed-income bonds plus equipment trust certificates and other serial bonds; those in Tables 7 and 8 are based on single-maturity, fixed-income bonds.

Term loans held: Based on data for a sample of 99 large commercial banks. From Neil H. Jacoby and Raymond J. Saulnier, *Term Lending to Business* (National Bureau of Economic Research, Financial Research Program, 1942) Table C–2, pp. 152–53, Table 3, p. 48, Table 4, p. 50, Table 5, p. 52.

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